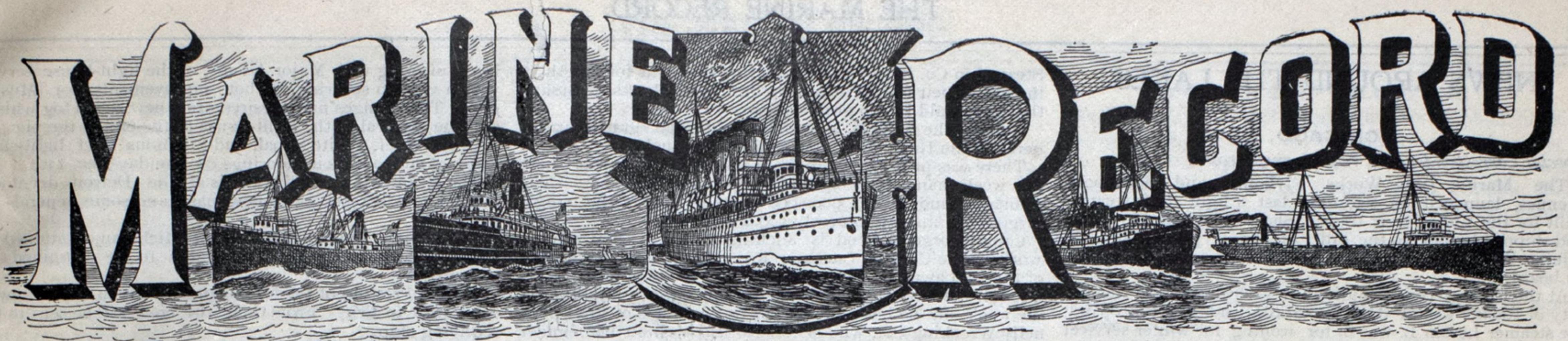


MARINE RECORD



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DOUBLE-ENDED SCREW FERRY BOAT CHEBUCKTO.

The steel ferry boat Chebucto herewith illustrated was built on the Clyde and is remarkable as being the first boat her class built there, and it may further be stated that her builders took the contract out of the hands of American and Canadian builders. Notwithstanding the model is such as is used for vehicular, railroad cars and passenger traffic on American rivers.

The Chebucto will go into the service between Halifax and Dartmouth, N. S., a distance of about two miles. Her principal dimensions are, length over all, 140 feet; keel, 123 feet; extreme width, 50 feet; molded beam, 33 feet; molded depth, 13 feet 7 inches; built of steel and rated in the highest class at Lloyds.

The shell plating above water is swept sharply outwards from about the molded width to meet the extreme width of 50 feet on deck. A screw propeller as well as a rudder and steering gear is fitted at each end of the vessel and both screws are used in propelling her, the forward rudder being held in a fore and aft position by a locking device controlled from each pilot house.

The engines consist of two pairs of compound surface-condensing, built upon one bed-plate and with low pressure receivers separated only by a division plate. The low pressure cylinders are 24 inches in diameter and the high pressure 12 inches, the length of stroke being 18 inches. When both engines are working, coupled together, she will be propelled by a double four crank engine, actuating a screw aft and a similar screw forward. The propellers are each four bladed, 6 feet 3 inches in diameter and 8 feet 3 inches pitch. There is an installation comprising five pumps of the Blake & Knowles steam pumps, including a duplex independent air pump having one 6 inch cylinder, driving direct without rotary motion a pair of air cylinders 12 inches diameter by 6 inches stroke, the first pump of this style ever fitted on the Clyde, though much in favor in the United States. There is also a special form of feed pump, a donkey pump, a boiler circulating pump, and a sanitary pump, all of the Blake & Knowles special horizontal duplex type.

The Chebucto, after having been sheathed and strongly battened over with wood to withstand the blows of the sea, left the Clyde on the 15th of August, under the command of Capt. Geddie with picked officers and crew. She experienced heavy weather in the Channel, and when about 260 miles out from the Tuscan she labored considerably, and it was found advisable to put back to the Clyde. She did so, and was in the hands of her builders for some time for additional staying and strengthening. She left the Clyde again on the 9th of September, and on the 29th of that month intelligence was received that she had put back to St. Michael's, the Azores, damaged and leaking. Here, in all likelihood, the Chebucto remains until the spring of next year, as any attempt to proceed during the winter would be attended with distinct peril.

NAVAL PROMOTIONS.

Commander T. F. Jewell, U. S. N., inspector of the tenth light-house district, with headquarters in Buffalo, and Commander Folger, U. S. N., of the eleventh district, with headquarters in Detroit, will be promoted to captaincies next February.

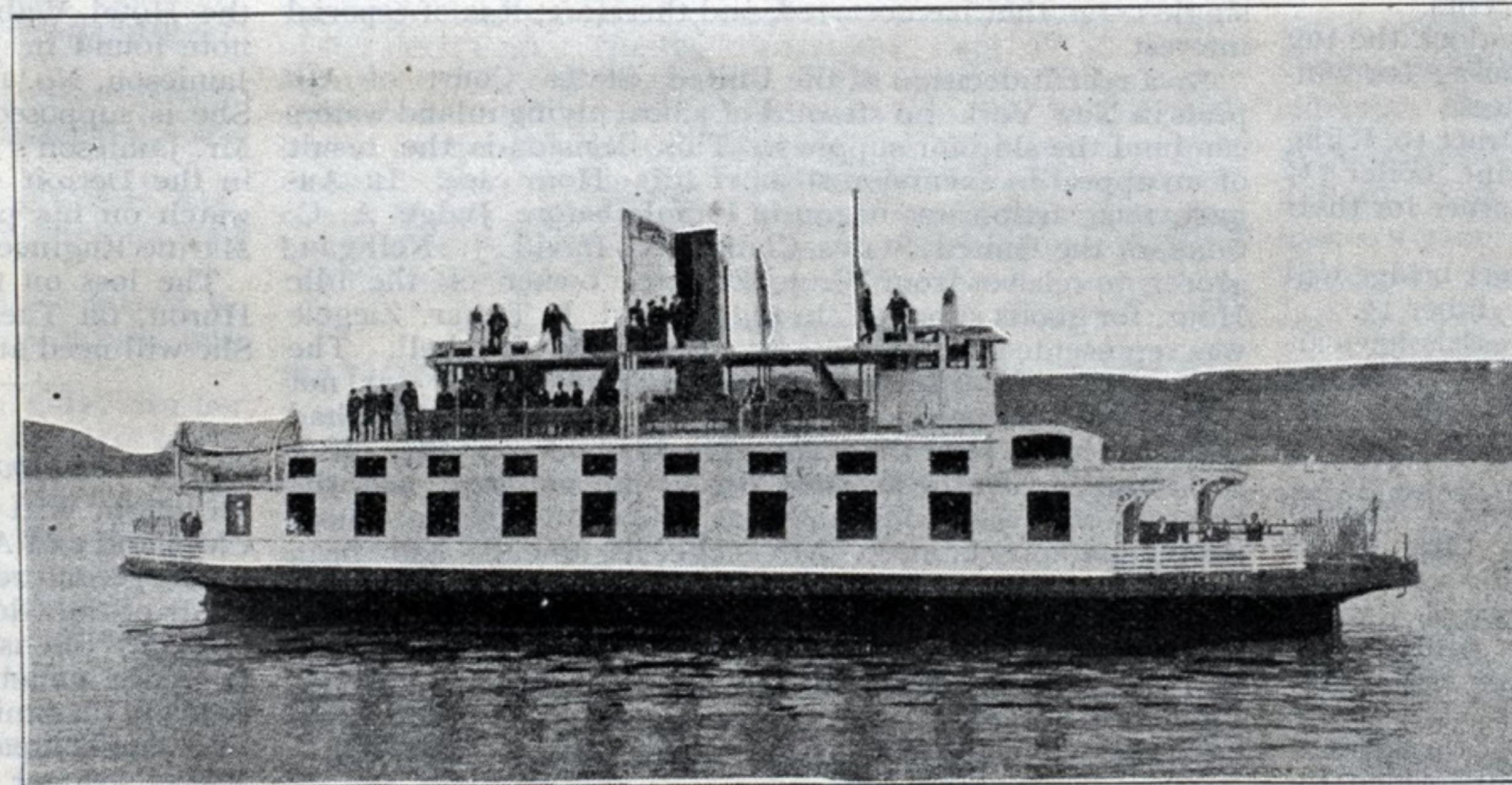
Capt. Jewell will take command of the old frigate Lan-

caster. She is used for gunnery practice and as a schoolship for newly enlisted men. Capt. Folger will be placed in charge of the third light-house district, which is a captain's detail. Both officers will be in line for assignment to a cruiser or battleship when there is a vacancy.

SAGINAW RIVER IMPROVEMENTS.

In his annual report to Secretary Alger, Col. Lydecker gives the following as the result of a survey and estimated cost of improving the Saginaw river and its tributaries:

The Saginaw river is now being improved by the United States under a project adopted in 1882, which provides for making a channel 200 feet wide and 14 feet deep from Saginaw Bay to Bay City, and 12 feet deep thence to Saginaw. The improvement suggested by the act contemplates channels two feet deeper than those provided for in the existing project and an extension of operations two and a half miles further up stream than any work thus far done. It is estimated by Col. Lydecker that the cost for the main channel will be \$452,925 and for the west channel between the middle-ground and West Bay City, \$29,700, in all, \$482,625. Col. Lydecker adds, however, that the improvement could not be completed on this estimate except with larger appropria-



CLYDE-BUILT FERRY BOAT CHEBUCKTO.

For vehicular and passenger traffic between Nova Scotia ports.

tions, admitting of continuous work, and that subsequent maintenance will cost at least \$15,000 annually.

The projects proposed for the Shiawassee and Bad rivers provide for dredging a channel 50 feet wide and 6 feet deep in Shiawassee river from Saginaw river to Bad river and up Bad river to the village of St. Charles, estimated to cost \$21,000, but Col. Lydecker states that a temporary improvement that would meet the immediate requirements of navigation within the proposed limits could probably be made with an expenditure of \$5,000, resulting in a navigable depth of about five feet.

The improvement of Flint river, as far as practicable from its mouth, a distance of about four miles, by dredging a channel 50 feet wide and 6 feet deep, will cost \$15,000.

THE United States torpedo-boat Winslow, the third of the three vessels of the same type built at the Columbian Iron Works, at Baltimore, Md., made more than the required speed on her first official trial on the 1st, over a course of 69 knots laid off in Chesapeake Bay. Twenty-four and a half knots were required, and the vessel went 24.8 per hour on her trial.

EXCESSIVE PENALTIES.

The annual report of Commissioner of Navigation Chamberlain is found to contain an important recommendation for the reformation of the present condition of affairs under which a number of men in the customs service are engaged in assessing excessive penalties, while their superiors in the department spend a great deal of valuable time each day in remitting the fines wholly, or in reducing them to reasonable sums. Mr. Chamberlain's recommendations relating especially to the navigation of the lakes, are as follows:

"By section 5294 of the revised statutes, as recently amended, full power has been bestowed upon the Secretary of the Treasury to remit or mitigate fines, penalties and forfeitures provided for in the laws relating to vessels. The frequent exercise of this power discloses the fact that in some instances the penalties prescribed for violation of the law are in excess of the offense, and greater probably than Congress would see fit to impose on further consideration. Thus by section 3 of the act of March 6, 1896, in addition to a fine of \$200 for violation of the regulations for navigation of the St. Mary's river, a vessel, its tackle, apparel, furniture and cargo become forfeited to the United States. This is the maximum penalty which may be imposed on a vessel for any offense, and is clearly out of proportion to the offense involved in a transgression of a regulation fixing the rate of speed between certain points or the conditions under which one vessel may pass another."

"It is suggested that the third section of the act of March 6, 1896, relating to the anchorage and movements of vessels in the St. Mary's river, be amended by striking out the words 'and the vessel, its tackle, apparel, furniture and cargo at any time used or employed in violation of such regulations, shall be forfeited to the United States.'

"The failure to produce duplicate bills of health from the American consul at a foreign port, under the act of February 15, 1893, involves a penalty of \$5,000, which if enforced in many instances would amount to the confiscation of the entire property of a delinquent master. So, too, under the act of March 2, 1895, it is provided that clearance shall be refused to a vessel carrying beef, unless an inspec-

tor of the Department of Agriculture has furnished the owner with certain certificates. The propriety of regulating the speed of vessels in the St. Mary's river, of requiring one or possibly two consular bills of health—though the duplicate serves no purpose—and of inspecting beef products for export, is not questioned, but confiscation of a vessel, confiscation of several years' earnings of a master and refusal of clearance to a trans-Atlantic liner are not necessary in order to enforce those desirable laws.

"It is suggested that any penalty which the Department of Agriculture may see fit to approve, in the way of confiscation of beef, without inspection tags, and a money penalty on any other on the exporter, may be proper, but that care be taken not to hamper the movements of vessels. It is hoped that the extent and nature of penalties, which may hereafter be imposed by statute on vessels, may be closely adjusted to the offense, and not made so severe as to require the daily exercise of discretion and clemency."

Chaplain M. M. Goodwin, attached to the receiving ship Wabash, who was recently charged with drunkenness and absence without leave, has resigned. The resignation has been accepted.

THE MARINE RECORD.

NEWS AROUND THE LAKES.

CHICAGO.

Special Correspondence to The Marine Record.

The Marine Iron Works, Clybourn and Southport avenues, launched on Saturday last a light draft steamer built for the Yukon river trade. She will be taken to pieces and shipped by rail to the order of the Gypsy Queen Gold Mining Co. She will draw 24 inches with a load of 30 tons on board.

At the Chicago Ship Building Co.'s shipyard the steamer City of Racine was in dock for calking and general repairs; the steamer Lorain L. was in for ironing for winter service; the schooner Michigan received some new rail and chocks and general repairs and calking all over; barge Tasmania received general repairs; steamer New Orleans is receiving a new boiler by John Mohr & Sons, new boiler house and part new deck.

The firm of Bolden & Griffin, vessel agents at 202 Main street, Buffalo, was dissolved by mutual consent on December 2, Capt. P. Griffin having retired. Mr. Bolden will continue the business.

At the shipyard here the steamer City of London was in dock for some new bottom plank and calking; the steamer City of Traverse is in receiving a new Sheriff's wheel and new stern bearing, also new legs and repairs to her boilers.

The steamer City of Traverse, Capt. Twichell, will leave here Wednesday to go on the route between Milwaukee and Benton Harbor for the Graham & Morton Transportation Co.

The steamer City of Duluth, Capt. D. MacLean, commenced running between Chicago and Benton Harbor last week. Chief Engineer Chalk, who had been engaged on her 14 years without having missed a trip, was compelled by a severe attack of pleurisy to lay off. Dan Robertson, chief engineer of the steamer Jay Gould, was given charge of the City of Duluth until Mr. Chalk is well enough to resume his duties.

Capt. George Tebo received a very pleasant surprise on the evening of December 8th, the anniversary of his 54th birthday. Capts. James R. Sinclair and Cyrus Sinclair and their families and nearly fifty more of the captain's friends, having made up a surprise party to give him an anniversary birthday and present him with many valuable birthday gifts. A most enjoyable evening was spent by all present.

J. J. Rardon & Co. chartered the steamer Sacramento for oats to Buffalo at 2½ cents; the steamers Rappahannock and M. B. Grover for corn to Buffalo at 2½ cents.

Capt. John Prindiville chartered the steamer Santa Maria for clipped oats to Port Huron at 2 cents; steamer Pontiac for oats at 2½ cents, and rye at 3 cents to Buffalo; the steamer E. M. Peck for corn to Buffalo at 2¾ cents.

At the Independent Tug line's floating dry-dock the tug Edward Watkins was in for a new stem and ironing for winter service; the steamer Diamond for a new wheel.

The Independent Tug line have let a contract to Kling Bros., boiler makers, Chicago, to build a marine boiler 7½ by 13 feet, to be allowed 150 lbs. steam pressure for their tug W. H. Wolf.

The U. S. custom barge office at Rush street bridge will be open only from 9 a. m. to 4 p. m. after December 15.

Since my last week's letter the following vessels have arrived at this port with wheat from Lake Superior: Steamers Normandie, Senator, S. R. Kirby, Maurice B. Grover, and schooners Geo. E. Hartnell and Martha from Duluth, steamer Mariposa from Superior.

The Goodrich Transportation Co.'s side-wheel steamer Sheboygan, Capt. David M. Cochrane, went into winter quarters at Manitowoc on December 4th, after a very successful season. The company's steamers City of Racine, Indiana, Atlanta and Iowa will run all the winter with freight and passengers between Chicago and west shore points as far north as Sturgeon Bay.

Capt. Frank Fountain's crew of eight men at the life-saving station at the mouth of the river has been disbanded for the winter, and Saturday was the first day since May 1, of this year that the captain has been compelled to rely solely upon the assistance of volunteers from the vicinity. The record of good work done during the season is highly gratifying to Capt. Fountain and the men from whom he parted company at the close of the season Friday evening, when navigation was officially closed. As is usual, however, arduous work is likely to follow, conditions necessitating a watchful guardianship of the harbor and the coast line of the city. The Evanston crew has also disbanded, but Capt. Fountain will continue on duty at the Chicago station.

The dry-dock at the yards of the Chicago Ship Building Co. is kept very busy just now. After repairs are made to the Selwyn Eddy the Marina will be dry-docked, followed by the steel steamer City of Bangor. All of these steamers will dry-dock for repairs to bottom damage, the last named having rested on a boulder outside the Canadian "Soo" lock on her last trip bound down.

Capt. James Gibson of the steamer Chili reports a record breaking feat in discharging coal. It was accomplished at the South Chicago yard of E. L. Hedstrom, where with four rigs 3,179 tons of coal were taken out of the Chili in sixteen hours and forty-five minutes. The gang employed on a previous occasion broke the record in discharging a coal cargo from the steamer America. Capt. Gibson claims that their equal as workers is not to be found on the lakes.

BUFFALO.

Special Correspondence to The Marine Record.

The report that the steamer Northern Queen was to be lengthened at Duluth is somewhat premature. The Northern

Steamship Co. have been considering the plans for lengthening all of their freight steamers, but it now looks as though the cost would be too great to pay.

Among the vessels booked to hold their grain cargoes here are the Italia, Empire City and Venezuela.

There was probably more grain afloat in the harbor here this week than ever before in the history of the port. The estimated amount was 3,000,000 bushels, some of the single cargoes running up to nearly 200,000 bushels.

Capt. George McLeod is sticking close to his salvage work on the Canadian steamer Rosedale, ashore at the head of the St. Lawrence on Charity Shoal. It is said that Capt. George will have the steamer in port all right by the end of the week, but he has now left her in the hands of the Donnelly Wrecking Co., who is doing brisk work on her under contract with the underwriters.

There was some talk of another charter or two on Wednesday, but shippers are out of market and won't send any more cargoes forward to Lake Michigan ports even at a reduced rate.

Harbor No. 41, Association of Masters and Pilots, will hold its first fall meeting in Tug Pilot's Hall, West Seneca and Pearl streets, next Monday night, for the purpose of nominating officers for the ensuing year.

Major Symons, Corps of Engineers, U. S. A., opened bids this week for a new steamer to be built for the use of the United States engineers in Buffalo harbor. She will be built much like a harbor tug, but more commodious. The wonder is that this new construction has not been advertised and competition freely extended to all bidders, such at least is the usual method on departmental government work.

Active work on the lengthening of one of the Union dry-dock continues. Dunbar has the contract for enlarging the approach to the dock.

A total of 68 lives were lost on the lakes this season. Falling into the hold was responsible for the death of a dozen. Forty-six were drowned and three committed suicide.

The suit of the American Steel Barge Company against the Northern Railway Company, of Minnesota, to recover \$1,947.51 alleged to be due for an alleged shortage in the cargo of the steamer J. B. Trevor, which was chartered to carry a cargo of wheat from Duluth to this port in 1896, is attracting much interest in marine circles. The complaint alleges that the steamer was loaded out of the Great Northern elevator at Superior, with a cargo supposed to contain 101,535 bushels of wheat. It is claimed that when the steamer reached this port the cargo was found to be short 2,449 bushels. Recovery is asked from the elevator company on the ground that the shortage arose through the mutual mistake of the latter and the tallyman employed by the vessel. This case is said to be the largest shortage on a single cargo that has occurred, and therefore, it is of especial interest.

By a recent decision of the United States Court of Appeals in New York, no steward of a boat plying inland waters can bind the ship for supplies. This decision is the result of an appeal in excursion steamer Idle Hour case. In August, 1896, action was begun in Buffalo before Judge A. C. Coxe, of the United States Court, by David J. Nelligan, grocer, to recover from W. J. Ziegeler, owner of the Idle Hour, for goods supplied to the steward, J. Towar. Ziegeler was represented at that time by Ingram & Mitchell. The defense made by the attorneys was that the owner was not responsible for supplies ordered by the steward; that he had no authority to bind the boat. The libelant on the other hand argued that the steward, being an employee, had the right to order the goods, and that the boat could be bound for the amount claimed. After the arguments had been made the case was quickly decided by Judge Coxe in favor of the libelant. The judgment did not satisfy the attorneys for Ziegeler, and so an appeal was taken to the United States Court of Appeals, in New York. Arguments were made by both sides, and after some weeks of deliberation the decision of Judge Coxe has been reversed.

DETROIT.

Special Correspondence to The Marine Record.

Many friends of Capt. Duncan McKenzie, formerly keeper of Middle Island life-station and now located at Duluth, will be sorry to learn of the death of his estimable wife.

Work at the Wyandotte yards of the Detroit Dry Dock Co. is beginning to get brisk; besides the 400 foot general cargo steamer to be built to the order of the Western Transit Co., work on the Dunbar & McMillan steamer for the Lake Michigan trade is being well advanced and material is being made ready for the large handsome side-wheel steamer for the C. & B. line, the latter contract alone is an important one involving as it does the expenditure of about \$300,000. A large amount of repair work on hulls, boilers and engines is also booked by the firm.

About a month ago Capt. Wm. H. Wilson was stricken with paralysis while passing through the straits of Mackinac. He improved for a time after being brought home, but suffered a relapse. Capt. Wilson's last command was the Livingstone. He has had command of her ever since she came out. Previous to that time he had commanded the Thomas W. Palmer. Capt. Wilson was born in England, but has lived in Detroit for almost 50 years. He owned a number of old time schooners and after he had disposed of his interests retired for a while. He is about 60 years old and has a wife, two sons, both married, and two unmarried daughters.

A party of prominent citizens and officials from Western Michigan were here a few days ago for the purpose of holding

a meeting with Major Adams, of the light-house service with a view to securing harbor improvements for Muskegon. The changes most desired are a new steam fog whistle and the removal of the light-house to the end of the pier.

Gray's Reef, White Shoal, and Simmons' Reef light-ships were taken from their moorings on Monday Dec. 13th.

The steamer J. H. Outhwaite is at the Detroit dry-dock, where she will receive two new masts and some general repairs.

Commander Rush, of the U. S. S. Michigan, stationed at Erie, has been ordered to Washington to be examined for promotion.

Ensign Preston, of the Michigan, has taken the crew of the Yantic to Erie. From there the crew will be sent to the receiving ship.

Material is fast arriving for the three boats to be built by F. W. Wheeler & Co., at West Bay City, for the Bessemer Steamship Co. Preparations are being made to rush the work and it is reported that about 2,000 men will be employed by Jan. 1st.

Considerable work will be done on the steamer City of Buffalo this winter. New decorating has begun, and when that and the new furnishings are completed she will not be outclassed by her sister ship, now under construction.

The Nyanza docked this week for repairs to her shoe and stern-bearings. While in dock she will be searched up.

As there are quite a number of grain laden boats down bound from Chicago, and also some up bound with coal, it is a question if the removal of Bar Point lightship, which took place on Wednesday, and the lightships from the Lime Kilns and Ballard's Reef, Thursday, is not altogether too premature. These aids to navigation are safe enough so long as ordinary cargo boats can traverse the lakes, and they should be left at their proper stations to as late a date as is compatible with their eventual safety.

Capt. James Millen, president of the Lake Carriers' Association, and Mr. A. A. Parker, visited Cleveland, Wednesday, to attend a meeting of the executive committee of the Lake Carriers.

A Duluth tug owner says that he would cheerfully take a contract for delivering boats to Duluth docks as late as January 1, every year. He says that he can work now to better advantage than they could a week or two weeks ago. There is always a cold snap in the middle or latter part of November and after this is over then follows several weeks of weather that does not materially increase the difficulties of navigation. As for keeping the Soo river open vesselmen do not regard that as a very serious problem. It is generally expected that if winter navigation is not fully realized next year that vessels will be moved later than ever before.

John Jamieson, aged fifty-five, engineer of the steamer City of Chicago, of Benton Harbor, Mich., died suddenly at the Hotel Wabash, here, on Monday afternoon. From a note found in Jamieson's pocket the address "Mrs. M. J. Jamieson, No. 13 Ohio street, Buffalo, N. Y." was obtained. She is supposed to be a relative and was notified by wire of Mr. Jamieson's death. The dead man had \$1,000 on deposit in the Detroit savings bank and had \$395 and a valuable watch on his person. He was a member of the National Marine Engineers' Association.

The loss on the steamer Stimson, which burned at Port Huron, on Tuesday night, will be about \$1,500 or \$2,000. She will need an entire new cabin, as well as boiler house.

CLEVELAND.

Special Correspondence to The Marine Record.

Clough, Witt & Co. are building a set of engines for the Cleveland and Alaska Gold Mining Co.

The second revenue cutter to be launched shortly from the yards of the Globe Iron Works Co., will be named the Onondaga. She is a sister ship in every particular to the Algonquin, launched last week, and they have both been constructed on similar lines to the Gresham, recently built by the same company.

The steamer Iosco, which stranded on Gray's Reef on Tuesday is owned by W. A. Hawgood and others. She left this port on Sunday with coal for Milwaukee.

Capt. Wm. Jamieson, of the Minneapolis, and wheelsman D. McIntosh were somewhat severely injured through an accident at Ashtabula harbor on Wednesday. Capt. Jamieson was carried unconscious to the residence of Capt. J. P. Devney and the wheelsman was removed to the Marine Hospital.

From the present outlook there will be quite a few boats moving even next week. Insurances are now effected on each separate risk, port, class of hull and cargo being taken into consideration.

The local life-saving station was closed at midnight on Wednesday. Capt. Motley wanted to keep the station open a few days longer as there is yet a great deal of traffic, but he could not get permission to do so.

The Wilson Transit liner W. D. Rees upbound to Duluth, and the City of Bangor bound down, were the last boats to pass through the Canadian lock at St. Mary's Falls canal this season. The American canal closed three days earlier, or on Dec. 10.

The Ship Owners' Dry-Dock Co. are kept very busy these times on extensive repair work and 250 men are employed on full time. The steamer Republic is in dock and 42 shell plates will be stripped off, a few of these can be rolled and replaced, but she will receive about 32 new plates as well as 84 frames and floors. The steel steamer Choctaw is also in dry-dock for eight plates re-rolled and new, also about 15 frames and floors. Capt. Tuttle is attending the repairs in the interests of the underwriters, and Mr. J. R. Oldham for the owners, both boats are owned by the same firm.

Brisk work will be carried on this winter at the Lorain

shipyards of the Cleveland Ship Building Co. Besides new tonnage there is a considerable amount of repair work to be done and steady employment for a large staff is assured for the winter.

It is learned that Chaplain J. D. Jones, of the Floating Bethel, saw service during the war in the old U. S. S. Yantic, now a naval reserve drill ship at Detroit, or, rather she will be when fitted up for that purpose.

During the week the Mutual Line steamer Corsia was docked in the Cleveland dry-dock for inspection and light repairs, being only in dock one day. The same line steamer Corona followed her on Saturday last for repairs to bottom damage, thorough inspection, etc. She will leave the dock on Friday, when the Menominee Liner German will be docked for inspection and whatever repairs and changes are found necessary.

The Chase Machine Co. have finished their sixth steam steamer, all of which are placed and giving good satisfaction. Congratulatory letters have been received by the firm regarding the two steam towing engines which they have built, and plans are being got out for a much superior engine than those formerly built by the company. Several recent orders placed are for steam hammers, a specialty which the Chase Machine Co. have been very successful in turning out lately.

I heard this week that Mr. John F. Pankhurst has left New Jersey and is now in Asheville, N. C. It is to be hoped that the balmy Southern air will entirely restore him to his old time health and vigor.

The River Machine & Boiler Co. have added about \$15,000 worth of new machinery to their plant and is now one of the best equipped concerns on the lakes for turning out good work with dispatch. The new tools consist of hydraulic hoister and crane, the crane capable of lifting up to forty-five tons. There is also a complete air plant for chipping, calking and drilling, and a large set of bending rolls and shears. The shops are now equipped with electric lights and are capable of handling anything in the line of heavy work required in the lake trade, and this too at short order. The proprietors, Messrs. Teare & Thomas, are among the most energetic men engaged in the marine line of business at this port.

FLOTSAM JETSAM AND LAGAN.

The steamers H. A. Tuttle and Specular and schooner Magnetic will winter at Milwaukee.

The season limit of insurance expired on the 13th and special rates are made after that date for each cargo carried.

There are over 20 coal laden vessels at Manitowoc. Some of the boats will hold their cargoes for 30 and 60 days.

Gen. Alger reports to Congress that it will cost over \$1,000,000 to make the 20-foot channel at Starve Island Reef, near South Bass Island, Lake Erie.

Very few vessels will be laid up in winter quarters at Sandusky, about a dozen small craft and local passenger boats with the harbor tugs about covers the list.

The steamer Cormorant, which will winter at Green Bay, is to receive new deck beams, deck and coal bunkers and will also have the cabin aft remodeled.

Repair work will be done upon the steel steamer S. R. Kirby and steel tow barge Hartnell at South Chicago, also upon the steamer Harvey Brown at Detroit.

The ice-breaker Algoma was paid \$300 a day for her services in connection with the release of the steamers Lackawanna and Russia from the Green Bay ice fields.

The Donnelly Wrecking and Salvage Co. has taken the contract to release the Rosedale for \$17,000. They have begun working on the boat, and mild weather favors them.

The departure of the Nicaragua Canal Commission from Washington, D. C., has been delayed by the illness of the civil engineer who was to take charge of the field parties.

The Marine Journal of New York says: The record passage of the old sailing ship Flying Cloud, from New York to San Francisco in 89 days, 21 hours, made in 1851, has never been equaled.

The steamer City of Bangor fetched up on a boulder outside the Canadian "Soo" canal and was obliged to lighten before being released. She reloaded her wheat at the Encampment and proceeded on all well Tuesday.

Frank E. Davis, Gloucester, Mass., is a fish dealer who ships over the entire continent. There is hardly a state in the union that Mr. Davis does not make more or less shipments to, and we note that his mackerel especially receives great praise from his western customers.

The season past has been one of the lightest in the history of head of the lakes milling since this became a milling center. Approximately the output of the head of the lakes mills will be about 2,600,000 barrels. Last year the output was 3,120,000 barrels, in 1895, 3,508,000 and in 1894, 2,946,000.

Lieut. J. F. McIndoe, Corps of Engineers, has taken charge of the government operations at Sault Ste. Marie under direction of Lieut. Col. J. G. Lydecker, in place of General Superintendent E. S. Wheeler, who recently accepted the position of chief engineer of the Nicaragua Canal Commission.

Among the vessels that will winter at Duluth are the W. D. Rees, Maruba, Masaba, Manola, Pathfinder, Sagamore, Victory, Constitution, Colby, Samuel Mather, J. B. Colgate, Rockefeller, Queen City, W. H. Gilbert, Peerless, Northern Queen, Andaste, Grampian, and the American Steel Co. barges 111, 117, 127, 118, 133, 137, and 126.

In the season just passed Marquette was the port of shipment for almost two million tons of ore. The exact figures are 1,945,519 tons. This is about half a million tons in excess of the amount shipped last year, or any previous year in the history of the port. Next year Marquette is sure to pass the two-million mark and it is predicted on good author-

ity that the total will be in the neighborhood of 2,250,000 tons. This prediction is based on the present and prospective condition of the iron industry.

The Sparta, Havana, Checotah, Biwabic, Anderson and William Young will winter at Green Bay. Considerable repair work is to be done on the vessels.

Capt. Adolph Freitsch, the daring Wisconsin mariner, who left Milwaukee in a 12-foot skiff last Thursday afternoon, arrived at Grand Haven all right. The journey of 80 miles across the lake took 25 hours. Freitsch was fatigued and half frozen when he reached port.

The British steamships Scythia and Bothnia have been sold by the Cunard line to London parties, who will fit them out for freight and passenger traffic between San Francisco and St. Michaels (Alaska) via Victoria, B. C.

Frank D. Mowbray, until recently Howard Gould's valet, has begun suit against Gould for \$50,000 for injuries sustained by the explosion of a signal rocket while employed as steward on George Gould's yacht Hildegarde, July 4, 1894.

On the stocks at Capt. John P. Devney's shipyard, at Ashabula harbor, a tug is under construction. The new boat will be a duplicate of the fish tug Effie B. The dimensions of the latter are 80 feet over all, 17½ feet beam, 10½ feet depth of hold. The tug has not been contracted for, but Capt. Devney is building it on speculation or for builder's account.

An accident that happened at the Hocking Valley coal docks at Toledo may cause trouble to vesselmen next spring, when navigation is resumed. One of the immense iron ore piles near the wharf gave way and some 2,000 tons of ore rolled into the river. The ore now lies on the bottom of the Maumee, but may be so scattered by the current and the ice that it will not form a bar to the safe passage of vessels.

A monthly steamship service has been inaugurated between New York and East India. The cargoes will consist largely of breadstuffs, steel rails and machinery. The new line will reach the Indian ports by way of the Suez canal. The first vessel, the Sahara, will be followed by the steamers Inchimona and Munificent. All three register about 4,000 tons each, with a cargo capacity of about 8,000 tons.

The Kaiser Wilhelm now holds the easterly and westerly records between Southampton and Sandy Hook. Another record has also been smashed by the great German liner, that of the best hourly average during a single voyage. The Lucania maintained an average hourly speed of 22.01 knots on the eastward voyage to Queenstown, ending May, 1895, but the record is now raised to 22.97 by the Kaiser Wilhelm der Grosse.

When leaving Grand Marais harbor the steamer Desmond grounded through being out of the channel, on releasing herself the tow line to her consort, the Hattie, parted, and the barge finally fetched up to her anchor with a loss of part of her deck load. The tug Pensaukee, Capt. W. C. Davidson proceeded to the assistance of the barge and after heroic efforts succeeded in towing her back into the harbor, with loss of anchors, deck load, fore rigging gone, steering gear disabled and leaking badly. The Hattie will winter at Grand Marais. The steamer afterwards whistled for the tug but as there was a heavy sea on and ice making very fast the tug did not respond and the Desmond proceeded on her trip.

NATIONAL ASSOCIATION OF MANUFACTURERS.

The third annual convention of the National Association of Manufacturers will be held in New York on January 25th, 26th and 27th. In capital invested, the value of products, and the number of hands employed, the National Association of Manufacturers probably represents a larger aggregate than any other business organization in the world.

It was formed in January, 1895, as the result of a widely existing desire for a strong and well-balanced organization, thoroughly national in its character, equipped for the performance of any service which the manufacturers of the United States might require. Upon this basis the association has developed into a powerful organization, embracing in its membership upwards of 1,000 of the largest manufacturers' interests representing every important industry and every prominent industrial centre in the country.

Among those objects which pertain to home interests are these: The conservation of the home market; the creation of a federal department of commerce and industry; the improvement of patent laws; the unification of railroad freight classification; the enactment of a uniform bankruptcy law; the improvement of internal waterways; investigation of foreign markets; establishment of sample warehouses; improvement of the consular service; restoration of the American merchant marine; restoration of treaties of reciprocity. The plans for the foreign work of the association provide for the careful investigation of possible new markets for American products, the study of trade conditions in various countries, and the ascertainment, as fully as possible, of the classes of American goods salable in different markets, with the conditions of competition which must be met.

These agencies are designed to be warerooms for the display of American merchandise of every description under conditions that will secure the most favorable attention of the possible purchaser.

SURGEON-GENERAL WYMAN, of the Marine Hospital Service, in his annual report says that during the fiscal year ending June 30, 1897, the total number of patients treated at hospitals and the dispensaries connected with the service was 54,777. Although the total number of patients treated was 674 in excess of those treated during the previous fiscal year, the expenditures were \$538,356, which is, \$21,000 less than for the previous year. The number of immigrants inspected by officers of the service at the various ports aggregates 232,141.

WHY IS A SHIP CALLED SHE?

In these days of rapid and extensive shipbuilding it is somewhat difficult and even at times vexatious in naming a new vessel to hit upon a word that has not already been appropriated. The names of nations, states, counties, cities, towns, rivers, mountains and dales, as well as those of mythical, ancient and modern historical, military, naval and scientific notables are all roped in, besides a host of others, in fact it would appear that the nomenclature of vessels requires a new field to work on, outside of numbers, alphabetical signs, etc.

Our caption, however, is, Why is a Ship called She, for, whatever her name may be, those on board from the stem to the stern speak of a vessel in the English as she, as for instance, she is coming up, or falling off as the case may be, she does or she does not answer her helm, she is going along as dry as a cup, or she is shipping water, all of which is strange enough for a "City of New York" or "State of Illinois" to do.

In looking into this matter it must be candidly admitted that the rule is not universal. The word ship is masculine in French, Italian, Spanish and Portuguese and possesses no gender in Teutonic and Scandinavian tongues. A man-of-war is, however, she to our sailors. Perhaps it would not be an error to trace the custom back to the Greeks, who called all ships by a feminine name, probably out of deference to Athene, goddess of the sea.

But the sailor assigns no such reason. The ship is to him a veritable sweetheart, and it is a common thing to hear him ascribing to it vitality and intelligence. It is not to him

"A painted ship
Upon a painted ocean."

Our own sailors are fond of bestowing feminine names on vessels, and have often a real fondness for some smart "barky" not felt by the landsman for his abode.

In support of his choice of a feminine name the sailor is able to point to the possession by the ship of various feminine characteristics and belongings. The ship is capricious and fitful, like a woman, he says. I heard one old shell-back say a ship was like a woman because the rigging cost more than the hull. The ship possesses a waist, collars, stays, laces, bonnets, ties, ribands, combings, earings, chains, watches, jewels, and scarfs, and there is often considerable bustle about her. She is full of pins, hooks and eyes, and wears stays. She also possesses a forehead, a nose, a head, eyes, shoulders, and more than one heart. She makes a good leg now and then when the breeze is fine, and can show a clean pair of heels. The supervising officer of a ship in port is familiarly called the "ship's husband." If we add that she is lank before she is rigged, and that she looks killing when fully rigged out, we may have enough good logic to account for the feminine name, and yet as we mentioned in the foregoing, it is she irrespective of the name in all cases under the American and English flags, for a President Lincoln would become a she in nautical parlance.

In furtherance of the custom and to show the hold it has taken even in newspaper parlance we reprint the following recent dispatch:

HAVRE, December 15.

The tug of the Compagnie Generale Trans-Atlantique that was sent to meet La Touraine met her off Barfleur and assisted by a second tug brought her into port, her arrival being greeted with loud cheers.

According to statements by the captain and officers, La Touraine lost her port propeller at 9:50 a. m., on the 7th. She proceeded with a single screw, but her speed was still further reduced by the bad weather.

IOSCO STRANDED ON GRAY'S REEF.

The steamer which stranded on Gray's Reef, early on Tuesday morning, was the Iosco, bound up with soft coal. There was a heavy snow storm when the steamer grounded. Her captain did not know that the lightship had been taken away, and depended on the fog signal to keep him clear. The wrecker Favorite, with twenty-three men, was at once dispatched to her assistance and began jettisoning her cargo. By Wednesday morning 350 tons had been thrown overboard and the Favorite tried to pull the steamer off the rocks. She was unable to move her, and the work of jettisoning the cargo was renewed. The captain of the Favorite expected to release the steamer by Thursday, although she appeared to be on for nearly her whole length.

THE records for Sault Ste. Marie canal show that about 18,000,000 tons of freight passed through that great waterway during the season now closed. The aggregate of freight carried on the lakes, not counting local traffic on Lake Ontario, is computed as being between 45,000,000 and 50,000,000 tons.

MARITIME LAW.

CHRYSSTAL, et al v. FLINT et al.

District Court, S. D., New York. Sept. 9, 1897.

GENERAL AVERAGE—NEGLIGENT STRANDING—HARTER ACT.—Under section 3, of the Harter Act of Feb. 13, 1893, providing that if the shipowner shall exercise due diligence to make the vessel seaworthy, neither the vessel nor her owner shall be responsible for faults or errors in her navigation or management, the shipowner has a right to contribution in general average for sacrifices made to save vessel and cargo stranded, although the stranding occurred through the negligence of the officers of the vessel.

SAME—ALLOWANCE OF GROSS FREIGHT ON JETTISONED Goods.—In a general average adjustment to be stated "according to the established usages and laws" of the port of New York, the allowance of freight upon jettisoned goods is the full freight as per bill of lading. The recent practice of the English adjusters to allow only net freight in such cases has not been adopted in New York.

This was a libel by George Chrystal and others against Flint, Eddy & Co., to recover upon a general average bond.

BROWN, District Judge. In November, 1895, the British steamship Irrawaddy, upon a voyage from Trinidad to New York, stranded on the coast of New Jersey, through negligence in navigation. Up to the time of stranding it is admitted that she was properly manned and equipped, and seaworthy. In endeavoring to get her off the beach by working her propeller with reversed engines, her machinery was damaged by sanding and by water from leaks, which was allowed to flow into the engine room in order that it might be pumped out; and on the sluices becoming choked, holes were bored in the bulkhead to permit the water to pass to the pumps. With the aid of salvors, the vessel was finally floated on November 20th, after a jettison of a considerable quantity of cargo. She then completed her voyage and made delivery of the rest of the cargo to the consignees in New York, on their executing an average bond for the payment of all losses and expenses which should appear to be due from them, provided they were stated and apportioned by the adjusters "in accordance with the established usages and laws in similar cases."

An adjustment was afterwards made in New York which allowed in the general average account; (1) the salvor's compensation, (2) the value of the jettisoned cargo, and (3) to the shipowner, the gross freight of the cargo jettisoned, and (4) the damages to the ship by sanding and by the flow of water into the engine room. The respondents thereupon paid \$4,483.64, their full assessment, except the sum of \$508.29, charged against them for the last two items above named, which they refused to pay, on the ground that as the stranding was caused by negligence in navigation, the shipowners were debarred from any recovery of general average from the cargo; they also claim that if any freight is recoverable for the goods jettisoned, it is only the net freight, i. e., the gross freight less the stevedore's and other charges which would have been incurred by the shipowners on the actual delivery of the goods had they not been jettisoned. The difference, it is agreed, would in this case be \$13.65.

The above libel was filed upon the general average bond, for the recovery of the last two items in the general average adjustment above named, on the ground that as the shipowners are not responsible to the cargo owners for the negligent navigation of the ship under the provisions of the Harter act of 1893 (2 Supp. Rev. St. p. 81), such negligence does not now debar them from general average claims; and that gross freight is recoverable, because such is the established law and usage of this country and of this port. All the facts are admitted, except as to the custom in regard to charging gross freight, upon which point witnesses have been examined upon both sides.

The questions presented are important, because they enter largely into every case of a general average adjustment growing out of faults or errors of navigation; and it is essential that the rule which is to be followed in average adjustments in cases falling within the Harter act, should be finally determined.

There is no doubt of the ordinary rule, in the absence of statute or contract to modify it, that where the peril has been brought about by the fault of the shipowner or his servants in the navigation of the ship, the shipowner cannot recover from the cargo reimbursement by means of a general average for his expenses in rescuing the ship or cargo. The codes of the principal maritime countries so provide in express terms; and our law is the same. Gourl, Gen. Av. 15; Lown. Gen. Av. (4th Ed.) 34; The Ontario, 37 Fed. 222; Ralli v. Troop, Id. 888, 890; Van den Toorn v. Leeming, 70 Fed. 251. This rule is not enforced against the shipowner alone; it applies equally to the cargo owner, and to any other claimant of contribution by whose fault the necessity for the sacrifice or expense was caused. Several of the maritime

codes expressly so state. Germany, § 704; Sweden, § 191; Denmark, § 192; Spain, § 810. Lowndes summarizes the principle and the general rule as follows:

"The broad principle may be laid down that no one can make a claim for general average contribution, if the danger to avert which the sacrifice was made has arisen from the fault of the claimant, or some one for whose acts the claimant has made himself, or is made by law, responsible towards the contributors." Page 34.

Considering that the claim to contribution in general average rests only upon equitable principles, it is hardly conceivable that this rule of exclusion could be otherwise. For if one's own fault, or the fault of those for whom one is legally responsible, had made necessary the expenses he incurs to retrieve it, there is no principle of equity that can sustain his claim that other persons, not in privity with him, should help him bear the loss. It is the responsibility for the fault and for the consequent damage that makes the crucial distinction in these cases. All the maritime codes that exclude the shipowner from reimbursement in general average for the ship's fault, make him liable to cargo owners for the master's bad navigation. This exclusion is based on his liability to the cargo owner, which logically and necessarily excludes the shipowner's claim to contribution in two ways: First, because the obligation to indemnify would require the shipowner at once to restore to the cargo owner as damages whatever he might collect from him as general average; second, because this same obligation makes the shipowner's claim to contribution incompatible in its inception with the fundamental conditions of a general average claim, viz.; that there must be, (1) a sacrifice; (2) a sacrifice voluntarily incurred, (3) a sacrifice incurred for the common benefit. But when the ship, through the master's fault, is legally responsible for all loss and damage, her expenses in rescuing the cargo from the peril which that fault has brought about can not possibly be treated as a sacrifice, since such expenses are nothing more than the performance of a legal obligation; for the same reason they are not voluntarily incurred, in the legal sense, since the ship is legally bound to make the rescue and bear all the expense of it, or else pay the increased damages from omitting to do so; and so the expenses of rescuing the cargo are not ultimately for the cargo's benefit, but for the pecuniary benefit of the ship, in diminishing as much as possible the cargo damages for which the ship's liability is already fixed by reason of her fault. Thus the ship's liability for all the loss and damage arising from her fault, whenever this liability arises, necessarily excludes any equitable claim by her owner to an average contribution from the cargo, because the legal conditions of such a claim cannot in such a case exist; and because, if allowed, any such contribution must be at once repaid to the cargo owner as damages.

I have dwelt somewhat fully upon this liability of ship and owner, and its relation to general average claims against the cargo, because there is no doubt, I think, that the liability to indemnify the cargo owner is the sole ground of the exclusion of the shipowner's claim to general average compensation for his expenses in rescuing the adventure from a peril caused by bad navigation; and because it, therefore, seems necessarily to follow that in cases where all such liability is abolished by law, as it is under the circumstances of this case by the Harter act, no such exclusion can be justified; and that where no such liability exists on the part of the ship or her owner, his right to a general average contribution from the cargo arises necessarily by the same principles of equitable right that apply in ordinary cases of general average.

Where due diligence has been exercised to make the ship seaworthy, and a common danger arises upon the voyage by "fault or error in the navigation or management of the ship," the third section of that act declares, that "neither the vessel nor her owner, agent or charterer shall become or be held responsible for damage or loss resulting therefrom." The previous liability of the shipowner to the cargo owner for faults of navigation, is thus abolished in all cases coming within the act. In such cases, faults in the navigation or management of the ship are no longer, by construction of law, faults of the owner, as heretofore; and the ship and her owner are now no more liable to the cargo owner for his damages therefrom, than the latter is liable to the shipowner for the resulting damages to the ship. Both are alike strangers to the fault, and equally free from all responsibility for it; and hence all expenditures or losses voluntarily incurred for the common rescue are no longer made in the discharge of an individual legal obligation or in diminution of a fixed liability resting upon one of the parties only, but are

truly a sacrifice, voluntarily incurred, and for the common benefit, as much and as truly when made by the shipowner as when made by the cargo owner alone. On principle, therefore, in such cases, the one is as much entitled to a general average contribution for his sacrifice as the other.

In this country and in England it has been held that the mere fact that the common peril arose by bad navigation, or bad management of the ship, or that a remedy in damages therefor may exist against the shipowner, does not prevent recovery of general average compensation by a cargo owner against the ship and against other cargo owners for his sacrifice made for the common benefit. Pacific Mail S. S. Co. v. New York, H. and R. Minn. Co., 69 Fed. 414, affirmed 20 C. C. A. 349, 74 Fed. 564; Strang v. Scott, 14 App. Cas. 601, 609. And several of the maritime codes expressly so declare. German Code, § 704; Sweden, 1864, Act No. 144, Code, 191; Norway, § 72; Denmark, § 192. In Strang v. Scott, supra, Lord Watson in delivering judgment in House of Lords says:

"The owners of goods thrown overboard having been innocent of exposing the Abington and her cargo to the sea peril which necessitated jettison, there equitable claim to be indemnified (by a general average contribution) for the loss of their goods is just as strong as if the peril had been wholly due to the action of the winds and waves."

Under this decision, if the shipowner be "innocent of exposing the ship and cargo to the common peril," as he is under the Harter act, or wherever a valid exemption from liability exists by the bill of lading, the shipowners' right to an average contribution must be sustained. Accordingly, in the subsequent case of The Carron Park, 15 Prob. Div. 203, Lord Hannen, then president of the probate division, sustained the shipowners' claim to contribution from the cargo in general average for expenses caused by negligent navigation, where by the terms of the bill of lading the shipowner was relieved of all responsibility of such negligence; and this upon the simple ground that the "relation of the goods owner to the shipowner has been altered by the contract that the shipowner was not to be responsible for the negligence of his servants." Upon similar clauses in the bills of lading, the same adjudications, and upon the same ground, have been made in the French court of cassation (L'Amérique [1878] 1 Dalloz, Rep. 479; the Allex. Lawrence [June, 1894] 10 Rev. Int. du Droit Mar. 147), and also in Belgium (The Alacrity [1895] 11 Rev. Int. du Droit was 123), though the contrary seems to have been held in Holland (see the Mary Thomas [1894] Prob. Div. 108, 113, 116).

(CONTINUED.)

NOTICE TO MARINERS.

UNITED STATES OF AMERICA—NORTHERN LAKES AND RIVERS—MICHIGAN.

TREASURY DEPARTMENT,
OFFICE OF THE LIGHT-HOUSE BOARD,
WASHINGTON, D. C., Dec. 13, 1897.

ST. JOSEPH LIGHT STATION.—Notice is hereby given that, on or about December 15, 1897, the color of the frame dwelling at this station, on the bluff in the city of St. Joseph, south side of the entrance to the St. Joseph river, will be changed from white to buff with red roofs.

By Order of the Light-House Board:

W. S. SCHLEY, Captain, U. S. N., Chairman.

WHEELER'S NOT A UNION YARD.

A paragraph in the Detroit correspondence of the RECORD Dec. 9th, stated that the yards of F. W. Wheeler & Co., ship and engine builders, West Bay City, Mich., had become unionized, is contradicted over the signature of the firm, as follows:

"We notice in the last issue of the MARINE RECORD an item stating that Mr. McNeal, Grand President of the Ship-builders' and Boilermakers' Union of America, has been in West Bay City for several days and that arrangements were made between him and this company to make our yards what are known as union yards. We wish to deny this absolutely, and to state that no such arrangement was asked of us by Mr. McNeal, and would not have been granted in case he had asked it. There is no truth whatever in the report aside from the statement that Mr. McNeal has been in West Bay City. Our yards are strictly non-union in every department, and will remain so."

OGDENSBURG TRANSIT CO.

ST. ALBANS, VT., December 1, 1897.

Mr. James G. Westbrook is hereby appointed Superintendent of the Ogdensburg Transit Co., with headquarters at Ogdensburg, N. Y., vice Mr. Frank Owen, resigned. Mr. Owen will for the present continue to act as General Freight Agent.

E. C. SMITH, President.

Manager.

LOCAL INSPECTOR AND ASSISTANT INSPECTOR OF HULLS AND BOILERS, STEAM VESSELS, STEAMBOAT INSPECTION SERVICE.

The United States Civil Service Commission announces that, on February 15, 1898, an examination will be held at Washington, D. C., and other cities throughout the United States, for the positions of local inspectors and assistant inspectors of hulls and boilers of steam vessels in the Steamboat Inspection Service, Treasury Department.

Among the vacancies which will be filled as the result of this examination is one at Buffalo, N. Y., at a salary of \$2,250 per annum, and one at Memphis, Tenn., at a salary of \$1,200 per annum. Attention is invited to the fact, however, that it is the practice of the department to appoint only residents of the district in which the vacancy exists. This examination is open, however, to persons residing in any steamboat inspection district in the United States.

Applicants for local inspector of hulls at seaboard ports must have had at least five years' actual practical experience as master or chief mate of sea-going steam vessels within the seven years next preceding the date of application, and those for interior ports must have had at least five years' actual experience as master or first-class pilot of steam vessels on inland waters within the seven years next preceding the date of application.

The qualifications for assistant inspectors of hulls are the same as those for local inspectors, except that the time of service must have been at least three years within the five years next preceding the date of application. Attention is invited to the fact, however, that at the port of New York some of the positions as assistant inspector of hulls do not require a knowledge of sea navigation, and for these there are necessary only the requirements for inland port positions. While at this port, therefore, the subject of sea navigation will be optional, applicants are informed that, in all probability, selections will be made of those who have shown a knowledge of sea navigation, and they are advised to take this subject in order to increase their prospects of appointment.

Applicants for local inspector of boilers must have had at least five years' actual practical experience as first-class engineer of steam vessels within the seven years next preceding the date of application, under United States license of the highest grade granted on the waters upon which he has been so employed. The fact that they have been so licensed must be of record in the Treasury Department. Applicants must be physically able to enter a boiler through a man-hole 9 by 15 inches, as required by Rule II, section 21, Rules and Regulations, Board Supervising Inspectors of Steam Vessels.

The qualifications for assistant inspector of boilers are the same as those for local inspector, except that the term of service required under license must be three years within the five years next the date of application.

In any case, however, the experience of the applicant must have been under a United States license of the highest grade granted upon the waters on which the applicant has been employed. The fact that the applicant has been so licensed must be of record in the Treasury Department.

Applications will not be accepted from persons under 25 or over 55 years of age, and applicants must be physically sound and free from color-blindness.

The examination will consist of a light educational test, together with practical questions.

Persons desiring to enter this examination should at once write to the United States Civil Service Commission, at Washington, D. C., for application blanks, Forms 304 and 363, which should be properly executed and promptly forwarded to the Commission.

No application will be accepted after the hour of closing business on February 7, 1898.

December 8, 1897.

THE CASE PROPELLER WHEEL.

The subject of screw propulsion has commanded the attention of many of the ablest men of the world. It is an important subject, and the temptation to try to solve the problem is great. Rankine, Froude, Griffiths, Hirsch, Ericsson, Napier, Thornycroft and many others have had their turn at it.

Mr. A. Wells Case, Highland Park, Conn., seems to have met with more than the usual modicum of success in his patented outward thrust propeller wheel and the propellers have been the means of his obtaining some highly laudatory testimonials relative to their efficiency under various conditions.

Before finally adopting the principle involved in the out-

ward thrust propeller wheel, Mr. Case made some very interesting and exhaustive experiments, with the result that he eventually secured from 18 to 19 per cent. gain on his former or original experimental construction.

It is easy to understand the uphill work necessary to bring about the adoption of new ideas in matters relating to engineering, and in this instance the patented outward thrust propeller wheel, as modeled by Mr. A. Wells Case, has been no exception to the ordinary experience when a new departure is being introduced. However, the Case propeller wheel is now past its experimental stage as it is used in scores of boats and all speak in the highest praise of the work got out of it, not only in increased speed, but also as it causes less vibration than the other styles of propeller wheels.

From the foregoing it is evident that the Case wheel has an enviable future and as it becomes more widely known many speed records will no doubt be attributed to its merits over that of other wheels.

VESSELS CLASSED.

The American Shipmasters' Association classed or rated this week in the "Record of American and Foreign Shipping" the following vessels: Barques Edward L. Mayberry and Gleneida, screw steamer Merrimac and the British three-masted schooner Leonard Parker.

SAGINAW RIVER LUMBER SHIPMENTS.

A total of 89,137,511 feet of lumber was cleared from the Saginaw river during the season. Of this total Bay City sent out 80,786,511 feet, and Saginaw 8,351,000 feet. The shipments and points of destination were as follows:

Tonawanda, 32,761,000 feet; Toledo, 7,364,431; Cleveland, 21,110,000; Buffalo, 7,295,000; Chicago, 10,390,000; Erie, 4,915,000; Sandusky, 1,505,953; Mount Clemens, 106,000; Marine City, 125,000; Black Rock, 220,000; Grand Haven, 300,000; Delray, 1,395,127; Huron, 865,000; Lorain, 1,020,000; Michigan City, 250,000; Manistique, 15,000; total, 89,137,511 feet.

Lath.—Sandusky, 914,000; Cleveland, 370,000; total, 1,284,000.

Shingles.—Cleveland, 300,000; Detroit, 250,000; total, 550,000.

CANADA RETALIATES.

Jonathan White, who has recently been appointed alien labor inspector, has commenced his duties very vigorously. He went to Beaverstone and returned last Sunday night with ten Americans which he was helping to get out of the country as quickly as possible. After delivering the gang to Uncle Sam, Canada's brother, Jonathan returned to Little Current Wednesday, looking for fresh game. Mr. White has the support of all Canadians in this section and if any American labor is left here it will be the people's fault. Alien labor has no quarter in Algoma. Mr. White, besides being appointed by the Ontario government to carry out the regulations on the crown lands, should also be appointed by the Dominion government and then he could reach all American labor whether on crown lands or not. He would like to make a trip to Horse Island to see how many Yankees are there. The regulations will be rigorously enforced so far as Mr. White's jurisdiction goes and the people at Algoma will not rest until all American labor is driven out of Canada.—Little Current Expositor.

THE DEAN PUMPS.

Dean Bros., Indianapolis, Ind., have just issued an illustrated catalogue No. 21, describing their independent air pumps and jet and surface condensers. The catalogue is clearly printed and contains a number of half-tone engravings, showing the several dimensions and style of their special manufacture. Dean Bros. have now in use on the lakes their air pumps and condensers for more than 150,000 horse-power and their condensing apparatus is the standard for lake steamers. Besides describing pumps the catalogue contains useful information regarding the best method of handling same, with a brief essay on the functions of pumps and condensers. The firm's works at Indianapolis are very extensive and may now be considered as a national industry. The firm have just received orders for marine pumps and other apparatus for steamships now being built by the Chicago Ship Building Co., Cleveland Ship Building Co., Globe Iron Works, Union Dry Dock Co., and F. W. Wheeler & Co. The orders include independent air pumps and condensers of 15,000 H. P., and ten ballast pumps, 12 in. by 18 in. by 20 in., aggregating in all forty steam pumps.

TO LESSEN DANGER OF COLLISION.

John C. Shaw, the admiralty lawyer of Detroit, Charles Counselman, the grain shipper of Chicago, and Wm. A. Prime, of the Prime-McCurdy syndicate of insurance companies, had a hearing before the Secretary of the Treasury on Saturday last, with a view of obtaining better enforcement of the rules for the prevention of collisions on the Great Lakes, and certain improvements in the administration of the duties of the steamboat inspection department.

The improvements asked were requested not only in the name of the shippers and underwriters, but also in that of the owners, whose largely signed request and petition was presented to the Secretary. One of the gentlemen said:

"We have assurances that the matters complained of will be taken up by the Board of Supervising Inspectors at their meeting in January, and we think that hereafter the dangers of collisions on the lakes will be lessened by a more thorough understanding and better administration of what is known as the White law, and which law is, I believe, considered by the vesselmen generally to be all that is necessary in the way of legislation for the prevention of collisions. At said hearing, the fact developed that a bill had already been introduced in Congress, requiring examination and licensing of officers of sailing as well as steam vessels. Mr. Corliss will look into and inform us as to the proposed act, which I believe is a move in the right direction, but which should be submitted to the Lake Carriers' Association before being passed upon by Congress."

ADVANTAGES OF HYDRAULIC RIVETING.

The first important point to be attended to when riveting is to be done, as a writer says in a contemporary, is to see that the holes are properly punched or drilled, and the rivets of a size to fit the holes. In boiler work the drift pin is too frequently used to bring the holes fair with each other, to the discouragement of all good work. The next thing is to see that the rivets are long enough. Good work can not be done if the rivets are not of sufficient length to allow a proper head to be turned up. Also the rivets must fit the holes. With a rivet too small to properly fit the rivet hole good work is an impossibility. The plates must further be held closely and firmly together when driving the rivets. It is one of the strong points of hydraulic riveting that the plates are forced together and held there while the riveting is being done; and in hydraulic and other power riveting it is of vital importance that the rivets be of sufficient length. If a trifle too short when hand riveting is done, the rivets can be coaxed into shape after a fashion; but with the machine riveter there is no chance of doing even a half decent job unless there is stock enough in the rivet to fill the machine set. The test of sufficient rivet length is to have a slight fin or rim of metal crowd out the ball around the heading tool. The fin need not be very wide—it should not even require moving but it should be there and of even width all around the outside of the heading tool. In hand riveting the best work is done when a rivet is driven here and there, bolts being used in the other holes to clamp the plates together while the intermediate holes are being riveted.

SAGINAW BAY TOWING CO.

Among the towing and salvage companies on the lakes the Saginaw Bay Towing Co. may be considered in the front rank with their powerful fleet of eighteen tugs named as follows: Traveler, Niagara, Boscobel, Winslow, Sweepstakes, Charlton, Peter Smith, Ella M. Smith, Charlie O. Smith, Annie Moiles, R. H. Wiedemann, Robert Emmett, Luther Westover, Sea Gull, Lulu Eddy, Mary E. Pierce, Sarah Smith, Florence. The work of towing the naval reserve drill ship Yantic, from Ogdensburg, N. Y., to Detroit, was considered a heavy piece of work and the Saginaw Bay Towing Co. picked out the tug Boscobel for the job and part of the way she ploughed the Yantic along at the rate of 11½ miles an hour.

The Boscobel is one of the most powerful tugs on the lakes. She is a wooden boat, built at Chicago in 1881, and rebuilt since by her present owners, who also fitted her out with the latest improved machinery and all wrecking appliances. She carries a crew of 14 men.

The officers of the company are: Benjamin Boutell, president; Peter C. Smith, vice-president; Lorenzo S. Boutell, secretary; Dudley W. Case, treasurer.

The total ore shipments from Lake Superior for the season amount to 12,210,784, divided among the different ports as follows: Marquette, 1,945,519; Ashland, 2,067,637; Gladstone, 341,014; Duluth, 2,376,064; Two Harbors, 2,650,750; Superior, 531,800; Escanaba, about 2,298,000.

THE MARINE RECORD.



ESTABLISHED 1878.

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CLEVELAND, O., DECEMBER 16, 1897.

THE Secretary of the Navy has directed that revenue cutters Nos. 4 and 5, now building at the Globe Iron Works, Cleveland, shall be known as the Algonquin and the Onondaga respectively. This is a change from the old custom of naming vessels of the Revenue Cutter Service after individuals, and it is a commendable one, too.

THE shipbuilding firm of F. W. Wheeler & Co., West Bay City, accomplished a skillful piece of work in bringing the ex-U. S. S. Yantic through the St. Lawrence system of canals to Detroit; so closely did she fit in the locks that she had to be fore shortened some and even her rudder had to be unshipped. She is to be refitted at Detroit and in future she will only be square rigged forward.

JUST as heretofore it is the underwriters that limit the navigation season and not the weather, here it is the 15th of December and the weather is as mild and soft as in the finest April days. Insurance on ship, freight and cargo cuts a wide swath in the earnings of a trip and leaves so little "gilt on the gingerbread" that owners are in a measure forced to place their vessels in winter quarters.

AN effort was made to get 6 cents on some of the last charters made from Fort William, Lake Superior wheat, but the continued mildness of the weather was against the rise, and 5 cents is said to have been the best that was paid. The best rate out of Duluth for wheat this season was 5 cents on 40,000 bushels that was carried by one of the Northern boats. This was a special lot and did not indicate the rate. The nominal rate being 4 cents, indicating the best figure for the season of 1897, as the 5-cent rate did from Fort William.

THE number of car ferries that have come into use within the past season or two, on Lakes Erie and Michigan is likely to work quite a change. So far as Lake Erie is concerned the coal trade is most likely to feel the innovation, while on Lake Michigan there will be no need of breaking bulk in the loading and discharging of vessels from cars, if, as now suggested the Ann Arbor line of car ferries keep open winter communication. This feature gives railroad companies a stronger hold on the lake trade and in a measure acts, or will act, derogatory to the best interests of vessel owners.

THE close of navigation leaves many vessel owners with barely a clean ledger. The season opened with low freights, then the coal miner's strike delayed shipments, and as insurance rates expired with king winter taking charge the carrying business had to be declared off. A query now con-

fronting the owners of small and medium-sized tonnage is how to compete with the immense five to six thousand-ton craft being regularly put afloat, and the question will come up with more pertinency than ever during the next and succeeding seasons of navigation. It would appear as if the smaller class of tonnage would do well to pick up a special trade, or to look for charters to shoal water ports where the big fellows can't enter.

A LOCAL inspector of hulls is required at Buffalo, the salary is \$2,250 per annum, now let our brightest and best hustle for the civil service examination, as the berth is out of the rut of politics and the incumbent, or rather the successful competitor in the first place, is likely to hold his position irregardless of a change in the administration. We hope there will be no lack of candidates for this enviable position, and may the prize go to the most estimable and deserving.

At the meeting of vessel owners held in Cleveland on Wednesday, an amendment to the by-laws of the Lake Carriers' Association whereby freight rates on coal might be made uniform, was taken under consideration. The consensus of opinion resulted in a committee of fifteen being appointed to go thoroughly into the subject and report at the annual meeting of the Association, which will be held in Detroit, Jan. 19th. With the exhibition of a little backbone and a universal agreement there is no reason why vessel owners can not obtain fair living rates of freight on coal as well as on any other bulk cargo, and, if the Association is to give its members a modicum of protection it would appear as if some such steps need to be taken, all rail, lake and rail do so, and why not all lake traffic take a hand at it?

LICENSE or grant certificates of competency to the master and officers of sailing craft as well as steam, make the examination of candidates for licenses progressive, adding more to the requirements each year until a fairly stiff test of technical qualifications is the rule at all lake ports. Let the supervising inspector general issue a code or standard up to which all candidates must reach in their examination before the local inspectors, and then delegate the final licensing power to the supervising inspector of the district, the right of appeal against the decision of the supervising inspector, if such a course is contemplated, to be vested in the decision of the head of the service. No appeal, however, would be taken, for when a candidate fails, he is about the first to realize his lack of training, knowledge or education, technical or scholastic. A change from the present slipshod style is absolutely necessary, and that speedily.

The arrival of the steamers Queen City and the W. D. Rees, at Duluth, and the down bound steamer City of Bangor, at Sault Ste Marie, on December 13, wound up Lake Superior navigation for the season, although later trips might have been made with every degree of safety and no ice breaking measures were required at that. The Lake Carriers' Association might well construct and station a tolerably good ice breaker in the "Soo" river, for fall use, using her for wrecking, lightering and towage purposes during the season whenever a "lame duck" enrolled in the association required such services. It is evident that some of the members are looking for more benefits from the association to which they pay their dues. There is now no sailors' union to fight, legislative matters, as regards river and harbor improvements, aids to navigation, etc., are being fairly well taken care of by congressmen representing lake districts, and there are but few measures brought up inimical to the best interests of the lake marine, hence the casting about for some tangible benefits which may accrue to the owner through membership in the association.

THE RECORD received notice from Commander E. H. C. Leutze, U. S. N. Inspector of the Ninth Light-House District, that the light-ships on Simmon's Reef, White Shoal and Gray's Reef numbered by the department 55, 56 and 57, left their stations to go into winter quarters on Monday, December 13, by order of the Light-House Board. On the following day, or in less than 24 hours after the light-vessel had been removed from the last-named reef an upbound steamer, loaded, found the spot where the light-vessel ought to have been, and the result will no doubt be a couple of thousand dollars loss. The question arises, was the services of this light-vessel as an aid to navigation dispensed with at too early a date, considering there is no ice to speak of in the vicinity even now. The Light-House Board are advised of the weather conditions existing at each lake district, especially regarding ice reports in the fall of the year, and,

exercising their discretion in the matter, issue orders accordingly. It would be interesting to trace by whose advice the steamer Iosco kept a sharp lookout for Gray's Reef light-vessel until she finally fetched up. These casualties have occurred so regularly each fall, owing chiefly, we presume, to the details of new officers in the district, that it is time the underwriters made an earnest effort to persuade the Light-House Board to leave well-known aids to navigation out on their stations as late as possible in the fall of the year and thus obviate large claims being made on the insurance companies. Vesselowners must be getting nearly tired of tackling this subject and registering a severe kick every succeeding fall, so that they would no doubt be pleased to see the other fellow whose pocket is picked making some demur regarding the ill-timed orders and actions of those who are put in authority over us in this matter of removing such aids, as when taken away, without due cause or notice, makes an obstruction to navigation doubly dangerous. Of course the Light-House Board do not wish to lose any of their equipment, but, for that matter, neither does the individual ship-owner or owners and the argument holds good that as long as an ordinary cargo boat can proceed on her trip without danger from ice just so long is it quite safe to keep light-vessels on their stations.

LAKE FREIGHTS.

Although season insurance, with days of grace, etc., expired at noon on the 13th, there is no reason why traffic should not continue in so far as the weather and ice reports are concerned, as, up to the 16th of Dec. the weather has been mild and open, nor is there any ice making to speak of on the lower lakes. The "Soo" locks are closed, thus shutting out water communication with Lake Superior, most of the principal aids to navigation have been removed and taken to their winter stations thus rendering navigation doubly hazardous on the lower lakes, at the same time vessels have a free and unobstructed passage Chicago-Buffalo and intermediate lake ports.

The last cargoes of grain from Lake Superior to Buffalo were, through the inscrutable laws of the bulls and bears, ordered to Chicago, and it was even asked that one of these later cargoes having reached Buffalo, should re-charter and deliver the wheat at Chicago, however, a difference in the freight rate was found to exist and the vessel discharged cargo at her original port of destination. The rate quoted for holding grain, Buffalo and Chicago or winter storage is 3 cents and $2\frac{1}{4}$ to $2\frac{1}{2}$ cents for delivery. There are still a couple of cargoes on the market at Chicago but vessels want liberal figures and underwriters are chary about taking risks the middle of December, so that the latter shipments may be held back and grain loaded later for spring delivery. Quite a little business is going on between Toledo and Buffalo without, as yet, any interruption from ice.

Coal charters are still talked about and no doubt will be for a few days yet 60 cents being taken for Friday departure, Cleveland to Gladstone, but both shippers and underwriters feel like calling the season at an end, the former chiefly on coal and the latter on grain.

The following tables show the average rate of lake freights per bushel, on wheat and corn between Buffalo and Chicago, during each month of the years named:

	May.	June.	July.	Aug.	Sept.	Oct.	Nov.
Wheat ...	1.3	1.2	1.3	1.5	2.0	1.8	1.5
Corn.....	1.2	1.1	1.2	1.4	1.8	1.7	1.4

Highest rate on wheat during 1897, $2\frac{1}{2}$ c.

Average rate for the same time, 1.5c.

1896.

Wheat ...	1.6	1.5	1.2	1.3	1.4	2.1	2.1
Corn.....	1.4	1.3	1.1	1.2	1.2	2.0	1.9

Highest during the season of 1896, $2\frac{1}{2}$ c.

Average on wheat, 1.6c.

1895.

Wheat....	1.2	1.2	1.0	1.6	2.1	3.1	2.8
Corn.....	1.1	1.1	1.0	1.4	1.9	2.9	2.5

Highest on wheat, $4\frac{1}{2}$ c. Average rates, 1.9c.

Duluth rates were as follows:

	May.	June.	July.	Aug.	Sept.	Oct.	Nov.
Wheat ...	1.3	1.5	1.2	1.5	2.3	2.1	2.0

Highest for the year, 1897, $2\frac{1}{2}$ c. Lowest rate, 1c.

Average for the same time, 1.7c.

1896.

Wheat ...	2.8	2.6	1.7	1.5	1.5	2.3	2.6
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Highest rates for 1896, 3c. Lowest, $1\frac{1}{4}$ c.

Average, 2.1c.

The average daily rate on five of the leading items of lake traffic was as follows:

	Cents.
Corn from Chicago.....	1.38
Ore from Duluth.....	58.30
Ore from Escanaba.....	44.26
Coal to Chicago.....	27.82
Coal to Duluth.....	23.7

LAKE CARRIERS' ASSOCIATION.

To consider and take action upon all general questions relating to the navigation and carrying business of the Great Lakes, maintain necessary shipping offices and in general to protect the common interest of Lake Carriers, and improve the character of the service rendered to the public.

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LAKE CARRIERS' ASSOCIATION.

The meeting of the executive committee of the Lake Carriers' Association held at the office of Capt. James Corrigan, Cleveland, on Wednesday morning, was well attended by local vessel owners. The meeting was called for the purpose of discussing the advisability of fixing a minimum freight rate on bulk cargoes.

The general sentiment was that with the help of the leading shippers the plan would work successfully. A committee was appointed to take the matter up with the shippers and report at the annual meeting of the association at Detroit next month. If a favorable report is made on the plan it will probably receive the support of the association, to accomplish which an amendment to a clause in the by-laws will be required.

It was expected that a number of out-of-town members would be present at the meeting, but Secretary C. H. Keep, of Buffalo, and President James Millen and A. A. Parker, of Detroit, were the only members from other ports that attended the meeting. All the leading ports are represented on the committee which was appointed by President Millen. Several shippers who are large owners of vessel property will work with the committee, although their names are not included in the list. The members of the committee are A. A. Parker, Detroit; M. A. Bradley, H. A. Hawgood, B. L. Pennington, H. D. Goulder and Capt. J. W. Moore, of Cleveland; W. H. Wolf, Milwaukee; C. W. Elphicke, Chicago; W. S. Brainard, Toledo; C. A. Eddy, Bay City; and A. B. Wolvin, Duluth. The committee will meet with the ore and coal shippers during the next few weeks, and will have the matter in shape so as to make a report when the association holds its annual meeting.

IGNORANCE OF LAKE NAVIGATION RULES.

Another request for the correction of what are deemed discrepancies in lake navigation rules has been made from a responsible quarter.

The object of the petition which was sent to Secretary of the Treasury Gage, is the amendment of regulations that endanger vessels and make collisions possible. The petition is signed by the Minnesota Steamship Co., American Steel Barge Co., Huron Barge Co., Interlake Co., Cleveland Cliffs Iron Co., Zenith Transit Co., and other companies owning vessels on the lakes. It is indorsed by Harvey D. Goulder, counsel for the Lake Carriers' Association, and is as follows:

Hon. Lyman J. Gage, Secretary of the Treasury.

"We, the undersigned vessel owners, believing that there exists a necessity for immediate action for the prevention of collisions on the Great Lakes and tributary waters, most respectfully request that your department will take such action as shall insure:

"First—That any and all rules which may be inapplicable or in any way conflict with the statutory rules and regulations for preventing collisions on such waters may be withdrawn from circulation thereon.

"Second—That supervising and local inspectors of steamers in various districts of the Great Lakes shall be familiar with all laws governing on such waters.

"Third—That the rules and regulations for the prevention of collisions be brought to the attention of, and be fully understood by, all officers of steam vessels licensed by the government."

The petition was first sent to Commissioner of Navigation Chamberlain, who made an endorsement to the effect that copies of rules and regulations and laws governing the navigation of the Great Lakes might be had on application to his office. Copies are sent to all applicants for them without exception.

General Dumont, in discussing the petition, said that he did not see why the pilot rules published by his office were not perfectly plain and intelligible to any man of average intelligence and familiarity with handling boats. He said that these rules were compiled under the direction and with the advice of the vessel owners of the lakes, and that they were therefore to blame for any fault that might be found with them. He said that he would refer the petition to the Board of Supervising Inspectors when they meet next month. What action they would take he could not predict.

THE LARGEST ORE DOCK.

Superior is to have the largest ore dock on Lake Superior. The contract will be let at once for another extension of the Allouez dock, which will enlarge the present quarters by a sufficient amount to make the entire capacity nearly 60,000 tons. The largest dock at present is the West Duluth No. 1, which can carry 57,600 tons. Ashland and Marquette follow next in size, with 36,036 tons and 36,000 tons, respectively.

There is a strong feeling extant among men engaged in the Duluth-Superior trade that the Wisconsin port is destined to eclipse the glory of its sister port, and this the largest ore dock on Lake Superior, they say, is but one of the later indications of its future supremacy in so far as shipping and commercial greatness is concerned.

DULUTH BRANCH HYDROGRAPHIC OFFICE.

The following has been received from the Hydrographic Office at Cleveland:

CLEVELAND, O., Dec. 15, 1897.

Referring to an item that appeared in the columns of the MARINE RECORD to the effect that Lieut. H. K. Hines, U. S. N., would come to the Cleveland Branch Hydrographic Office before assuming charge of the branch office to be opened at Duluth, I have now to inform you that the Navy Department has revoked the order to Lieut. Hines, and the opening of the Duluth office will be delayed until another officer has been found for that duty. G. H. STAFFORD, Lieut. U. S. Navy.

LOW SEASON FREIGHT RATES.

Wheat from Lake Superior shows a material falling off this season owing to the short crop, but corn, oats and other grain from Chicago supplied the deficiency. For weeks at a time Chicago shipped over 7,000,000 bushels of grain, and it is believed that the year's report of the Board of Trade will show that Chicago's grain trade has surpassed everything in its previous history.

But even when corn was moving a million bushels a day, and while all other important lines of traffic were fairly well occupied, freight rates hung away down. At times the charge for carrying a bushel of corn from Chicago to Buffalo went to $\frac{1}{8}$ of a cent, and the 1-cent rate ruled for several weeks. During this period vessels were taking coal from Buffalo at 20 cents per ton. Vessel owners claimed they were carrying ballast both ways. Only the largest class of vessels were enabled to pay expenses during half the season.

Last season's soft coal rate to Duluth was 29 $\frac{1}{2}$ cents; hard coal to Chicago, 36 cents; wheat, Chicago to Buffalo, 1.70 cents; ore from Duluth, 77 cents.

SEASON LOSSES.

The season has passed over without any very heavy financial losses, although outside of the many cases of striking, stranding and grounding or the so-called touch, and go-casualties, involving more or less bottom damage and sometimes rather extensive at that, there has been seven cases of foundering and two collisions involving total loss, notably that of the steamer Florida and the loss of 19 lives on the steamer Idaho, while two lives were lost through the burning of the steamer Nahant in harbor at Escanaba.

In a general summary the total loss on hulls may fairly be placed at about \$400,000 and 13,500 tons capacity; this, of course, is irrespective of and entirely outside of all damage cases, whether by fire, stranding or collision.

In new tonnage, about 20 high-classed vessels of nearly an aggregate tonnage of 80,000, will be ready for business next summer and the new construction runs from the highest class side-wheel passenger steamer down to powerful tug boats, as there is no use building anything but the best at this stage of lake navigation.

EASTERN FREIGHT REPORT.

According to the Eastern freight report furnished the RECORD, by Messrs. Funch, Edye & Co. New York, there is a fair amount of business arranged for January loading, and next to no transaction for later months. Shippers are practically unanimous in stating that there is no demand beyond January, evidently in anticipation of free offerings from the River Plate. Large boats for January for picked ports can still be placed at 3s. 1 $\frac{1}{2}$ d. and 2s. 9d. @ 2s. 10 $\frac{1}{2}$ d., although the advance in the price of oats militates against the latter. Any fixtures of such tonnage beyond January is at the moment on a purely speculative basis. Cotton freights at the Gulf and the South Atlantic ports lack snap, and, at the latter especially, owners' demands are out of line with rates obtainable for parcel lots. There is no pronounced demand for steam tonnage to carry case oil, and, at the moment, any inquiry cropping up at the Gulf timber ports fails of accomplishment, owing to owners' enhanced demands.

Business in sail tonnage since our last has continued very light, and the number of unemployed vessels in port has somewhat increased. Rates, however, show no particular change, except for the development of some weakness in timber freights to Europe from the Gulf, and the very light demand for vessels suitable only for barrel oil. Tonnage for case oil freights is at fair request, and for the far East continues to command full rates. Vessels for general cargo to the colonies are likewise inquired after for the next few months.

POSITIVE ACTION.

THE committee which appeared before the Secretary of the Treasury a few days ago and requested a better enforcement of the sailing and steering rules on the lakes, and certain improvements in the administration of the duties of the steamboat inspection department, are to be congratulated on the manner in which they carried out their intentions. Columns may be written, appeals made to the supervising inspector general and petitions laid before the board of supervising inspectors at their annual meetings, all to no purpose, but when a representative committee composed of one of the largest grain shippers, an influential underwriter and a prominent admiralty lawyer tackle the fountain head, as Messrs. Counselman, Prime and Shaw did, something has got to develop, and that, too, in proper order.

NOTES.

THE Duluth Sunday News-Tribune, Dec. 12th, comes out with a handsome colored cover, symbolizing the "Star of the East," for its Christmas number.

APROPOS of meteorites, the following amusing story is told by Sir Robert Ball respecting one of these celestial visitors. A meteorite which fell on a farm in America was claimed by the ground landlord, as his lease reserved all minerals and metals. The tenant objected on the score that the article was not on the property when the lease was executed. The landlord then claimed it as flying game, but the lessee pleaded that the thing had neither feathers nor wings, and claimed it as ground game. But while the dispute was going on the customs officers seized the meteorite on the ground that the revenue had been defrauded by its introduction into the country without paying duty.

AN EXPEDITION leaves Chicago about April 15, 1898, for Demerara in British Guiana, Cayenne and Paramaribo in French and Dutch Guiana. The manufacturers' representatives will then visit with their floating exhibit the Brazilian ports as follows: Belem (Para), San Luis, Parnahyba, Fortaleza, Rio Grande do Norte (Parahyba) Pernambuco (Recife), Maceio (Jaragua), Bahia (San Salvador), Rio de Janeiro, Santos, Paranagua, Santa Catarina (Florianopolis), Rio Grande do Sul. Porto Allegre. In Uruguay the expedition touches Maldonado and Montevideo. In the Argentine Republic the ports to be visited are, Buenos Ayres and Rosario. Government reports show that, outside of Buenos Ayres and the capitals of the Argentine States (which have an aggregate of 700,000 inhabitants), the confederation contains 1,010 towns, villages and hamlets. The duration of the cruise will be seven months seven days. A. L. Lowe, Room 6005 Medinah Temple, Chicago, Ill., will furnish complete particulars.

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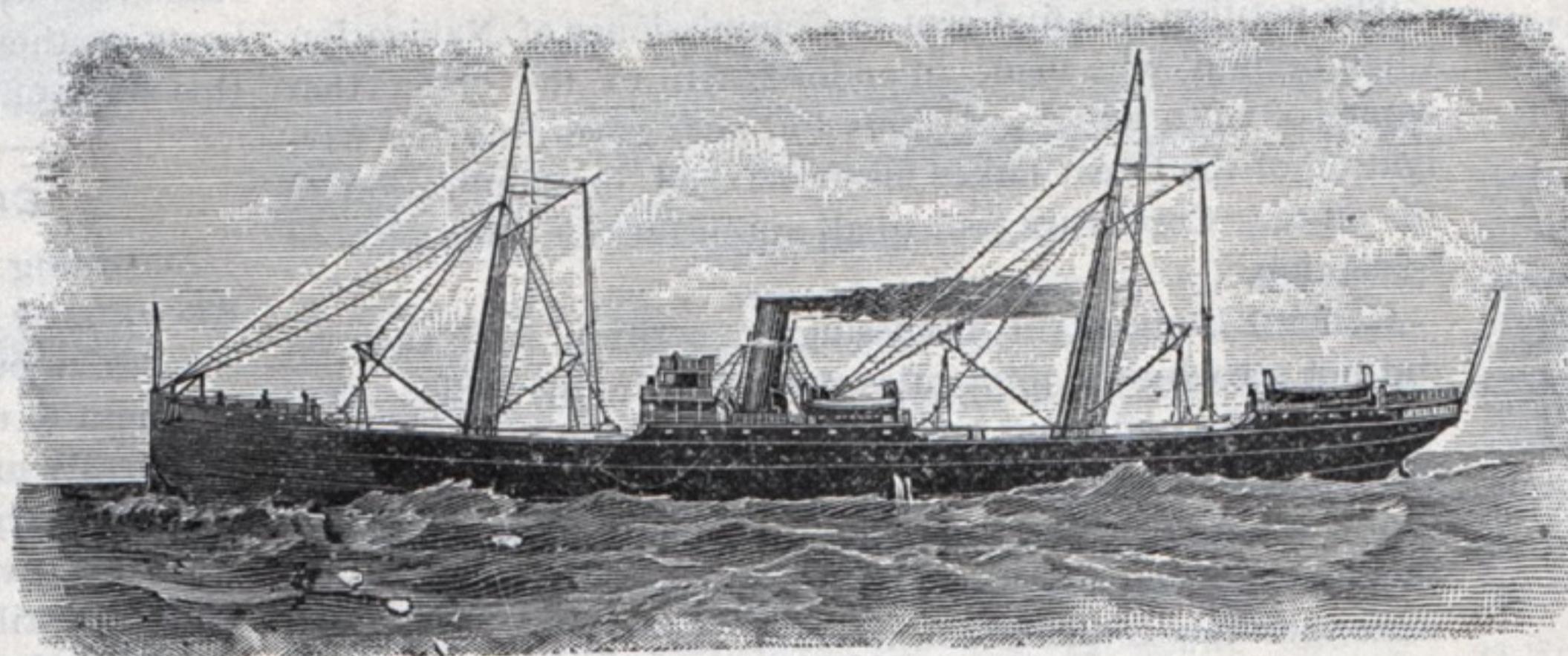
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AIDS TO NAVIGATION.

(COMMUNICATED.)

Some years ago a captain of prominence in lake shipping circles, in treating on the subject of aids to navigation in some marine paper, expressed himself as follows: "As to the ship's compass, however much may be claimed regarding a perfect adjustment by magnets, I do not believe perfection can be attained on all courses upon any ship, and it is still left imperative with masters to jot down the courses run until the proper compass course is established."

"From what experience I have had with a ship's log, I am led to believe that they are of no practical value in fresh water navigation, as they are not sufficiently accurate to rely on when running in thick weather, and, of course, not necessary in clear weather. In fact, I have known of several accidents caused by relying on their accuracy in thick weather."

"In conclusion I will say that a familiarity with the chart, a frequent use of the lead line, a knowledge of the inaccuracies of the compass, a substantial steering gear and a vigilant lookout are among the essential elements of safety in commercial pursuits on water."

These views are still entertained by the great majority of lake captains, affording a fair criterion of their proficiency in navigation. As to adjusted compasses, there are almost always some residual errors left which cannot be compensated. The principal object in adjusting compasses is to reduce large deviations to a minimum, to bring them within manageable limits, thus equalizing the directive forces, preventing sluggishness of the compass on some particular points. Perfection is attainable only when the arrangement of the needles is after the fashion of the English Admiralty and the magnetic forces of the vessel act on the compass in accordance with well established laws, that is, as a whole from a distance and do not exceed certain limits. But it is seldom found that these conditions obtain as to the make of compasses and where they are placed on board of lake vessels, and therefore some residual errors are generally left after adjusting, which to ascertain it is necessary to swing

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CHICAGO, ILL.

the vessel to all points and compare courses with well-known magnetic bearings. By jotting down courses, compass errors cannot be found, because of leeway and current interfering; but persons not trained in navigation use this method, ignorant of its fallacies.

The remarks as to a ship's log, by which is meant a floating or patent log, are correct only as to distances by it not being reliable, not because of fresh water navigation, but because of being affected by currents on the lakes as well as on the ocean; the floating log giving only the distance on the water and not the distance made good, the latter resulting from the distance per log, and the distance the vessel is carried by the current during a run. This vital point is generally ignored, and therefore accidents are of frequent occurrence on the lakes.

The remark of logs being not necessary in clear weather shows looseness in the reckoning of lake navigators. For, although floating or patent logs can not be relied upon, they furnish at least some approximate values for the guidance of vessels until their position is verified by bearings or soundings. The only log giving correct distances is the ground log, but its use is not known on the lakes.

As elements of safety are cited in conclusion, a familiarity with the chart, a frequent use of the lead line, a knowledge of the inaccuracies of the compass, and a vigilant lookout.

In thick weather a vigilant lookout is not of much use, a mere familiarity with the chart neither, and the frequent use of the lead is in itself no safeguard at all. Safety in thick weather depends on such factors, as for instance, a knowledge of the principles by which strandings are prevented; the shaping of courses so as to be easily controlled by the lead; the use of the ground log where the lead fails or is out of place; the ascertaining of compass errors by correct methods, and so on. Besides, it is not the frequent use of the lead, but its timely and judicious use which ensures safety. From all of which follows the necessity of a thorough knowledge of all the principal methods used to avoid dangers, and of a thorough knowledge of the influence of currents, and the peculiarities of compass and log on that account; in short,

the necessity of a thorough training in the rudiments of navigation. Without such training nobody is able to intelligently navigate a vessel and keep her out of danger in thick weather, the numerous strandings in proof thereof.

Lights have been multiplied on the lakes ad infinitum, but they avail nothing in thick weather. And as fog signals can not be depended upon, it is incumbent upon every navigator to find without such aids by a safe route the place of destination. The key to this route, and how to keep the vessel on it, is furnished by scientific training, which, under all conditions and circumstances, is a never-failing, and therefore superior aid to navigation. JOHN MAURICE.

Chicago, December 14.

THE ROBERTS SAFETY WATER TUBE BOILER.

The Roberts Safety Water Tube Boiler Co., of Red Bank, N. J., and 41 Cortlandt St., New York City, undoubtedly have the largest works in the United States which are devoted exclusively to the manufacture of marine water tube boilers.

Nevertheless, they report that they now have orders on hand which will tax these works to their fullest capacity for at least three months to come.

Among others, are the following:

1,400 indicated horse power for the steam yacht Embla.
1,200 indicated horse power for a new steam yacht building by the Erie Basin Dry-Dock Co. (John N. Robbins Co.) for Mr. E. W. Bliss, former owner of the Embla.

1,000 I. H. P. for the New York and Sing Sing passenger and freight steamer Sarah A. Jenks,

1,200 I. H. P. for the steel tug in course of construction by the Union Dry-Dock Co., of Buffalo, for Maytham's tug line. This tug will be used for towing mud scows against an eight mile current in the Niagara river, and the construction of this tug was made necessary by the fact that no tug could be procured on the lakes which was powerful enough for the purpose. The big steel dredge which will fill these dump-scows is now completed. She was built for Hughes Bros. & Bangs, by the Osgood Dredge Co. of Albany, under

* * FOR * *
* * UNION * *
STAND HOLES
* * AND * *
MAN HOLES



the superintendence of Mr. H. T. Dunbar, of the firm of Dunbar & Sullivan, the well-known contractors. This is said to be the largest bucket dredge in the world and she is intended to dig in 100 feet of water. She will be used on Hughes Bros. & Bangs contract with the United States government for the improvement of the Buffalo harbor. This dredge also has about 1,000 H. P. of Roberts boilers which were specified on account of the success of Roberts boilers in Dunbar & Sullivan's big dredge Killkenny for the past three years. The Roberts Co. also have a duplicate contract for boilers for another dredge on the Atlantic coast. They also practically have another order for about 800 H. P. for a new compound tug which will be built this winter.

Also a contract is practically closed for boilers with about 70 square feet of grate surface for another yacht, from which the previous unsatisfactory boilers will be removed.

These orders are in addition to many smaller orders, among which we might name a heavy order for several small boilers to be used on the Yukon river and the lake district of Alaska—as well as an order for a boiler for the new electric light plant at Fort Fisher, on the North Carolina coast.

Many other orders are pending which, when received, will keep their works busy until June.

The great success of the Roberts boilers in steam yacht Marietta No. 3, has renewed the interest of yachtsmen in this type of boiler. The Marietta indicated nearly 1,400 horse power with her Sullivan engines and Roberts boilers and made an actual speed, by patent log, of twenty knots—nearly twenty-three miles—per hour. The Marietta is not a racing machine but a schooner-rigged cruising yacht.

We understand that the Roberts Co. have made a proposition to the Plant System to furnish boilers for La Grande Duchesse on one year's trial. The previous boilers are to be removed at an early date. They are the same type of boilers which were taken out of the steamer Unique at Detroit nearly three years ago and which were replaced by Roberts boilers which have never cost a cent for repairs or a moment's anxiety to the owners of the Unique. They have also proved very economical in fuel.

The Roberts Co. claim that they have built 889 marine

boilers up to date and can refer to all of them. They also claim that this is more than the entire output of all other marine water tube boilers manufactured in the United States combined.

VISIBLE SUPPLY OF GRAIN

As compiled for The Marine Record, by George F. Stone, Secretary Chicago Board of Trade.

CITIES WHERE STORED.	WHEAT. Bushels.	CORN. Bushels.	OATS. Bushels.	RYE. Bushels.	BARLEY. Bushels.
Buffalo	2,512,000	2,450,000	937,000	236,000	2,026,000
Chicago	6,338,000	17,467,000	1,426,000	583,000	921,000
Detroit	218,000	58,000	7,000	45,000	15,000
Duluth and Superior	1,242,000	1,135,000	938,000	926,000	498,000
Milwaukee	149,000	62,000	81,000	21,000	72,000
Montreal	97,000	66,000	281,000	26,000	31,000
Oswego	10,000	101,000	.....	.....	80,000
Toledo	214,000	791,000	344,000	29,000	.....
Toronto	40,000	.....	8,000	.....	58,000
On Canal	.....	.....	46,000	.....	.....
On Lakes	2,470,000	1,569,000	1,395,000	235,000	111,000
On Mississippi	.....	.....	.....	.....	.....
Grand Total	34,744,000	40,680,000	14,349,000	3,681,000	4,889,000
Corresponding Date, 1896	54,284,000	17,461,000	11,359,000	2,582,000	5,493,000

While the stock of grain at lake ports only is here given, the total shows the figures for the entire country except the Pacific slope.

THAT FUNNY OLD DOG WATCH.

The value of employing a lawyer who knows something of sea life when a case pertains to nautical matters, is again illustrated by the following story from the Pittsburg Dispatch:

In an insurance case the counsel asked an old sailor at what time of day a certain collision occurred, and received the reply:

"About the middle of the first dog watch."

In summing up the case the barrister enlarged upon the information thus imparted, as follows:

"You can imagine, gentlemen of the jury, the care which existed on this occasion, when, as appears from one of plaintiff's own witnesses, this valuable ship and her cargo and the lives of passengers and crew were intrusted to what, gentlemen!—why, to the mere watch of a dog!"

VESSELS LAID UP AT SHEBOYGAN.

Mr. W. C. Thomas, of the Sheboygan County News, sends us the following list of vessels of the Sheboygan fleet laid up at that port for the winter:

Schooners, Abbie, Rosa Bell, City of Grand Haven, Eliza Day, Driver, Jos. Duvall, Lilly E., C. Gordon, Levi Grant, J. H. Holmes, R. P. Mason, H. D. Moore, Mary E. Packard, Petrel, Quickstep, L. E. Raessar, Sardinia, J. H. Stevens, Jennie Weaver, Thomas Wilson. Steamer, R. A. Seymour.

The schooner Ida Olson, of Green Bay, the schooner Brunette, of Cleveland, O., and the steamer Wetmore are also laid up there.

The steamer Wm. Rudolph is laid up at Sturgeon Bay to be rebuilt this winter by Rieboldt & Wolters.

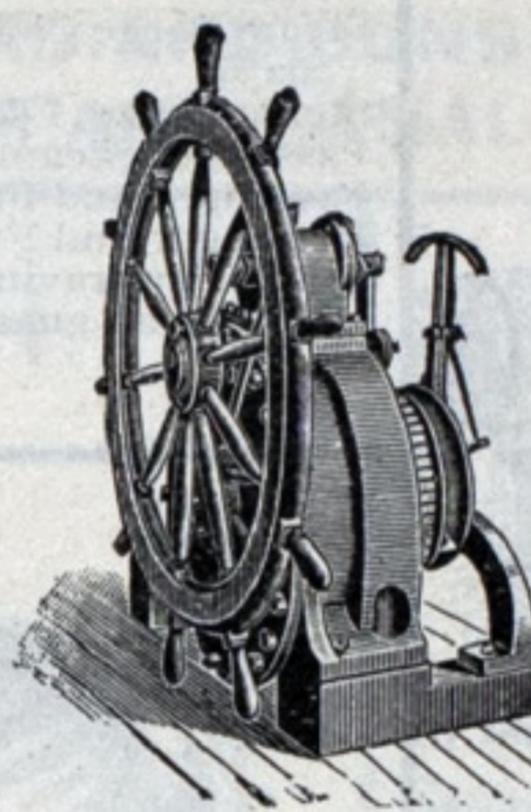
The following Sheboygan schooners Vega and John Mee, and the steamer Susie Chipman will also likely winter at Sheboygan.

THE closing of the Canadian locks on Monday, Dec. 13th, ends Lake Superior navigation for the season. Last year the date of closing was Dec. 8th.

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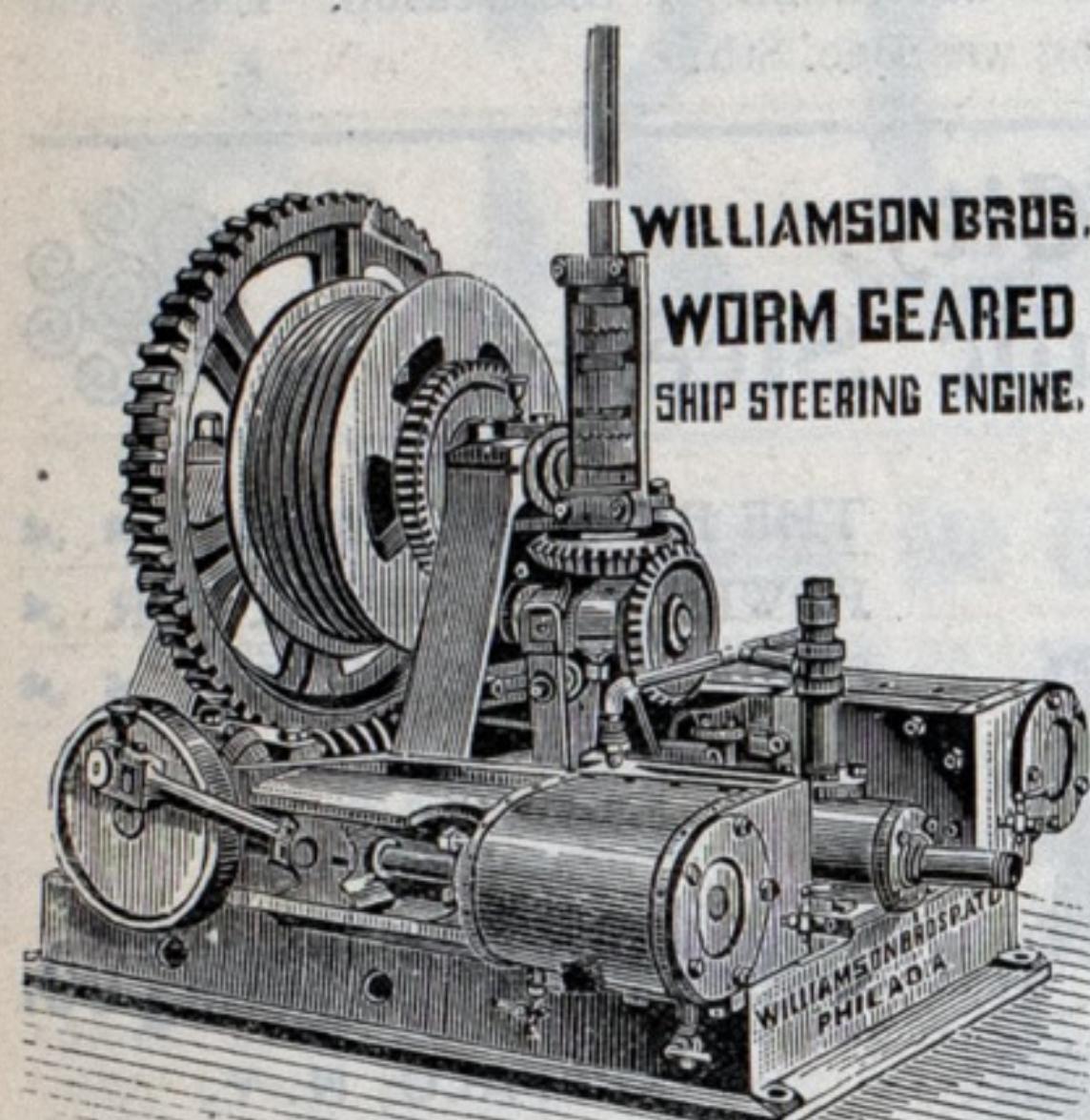
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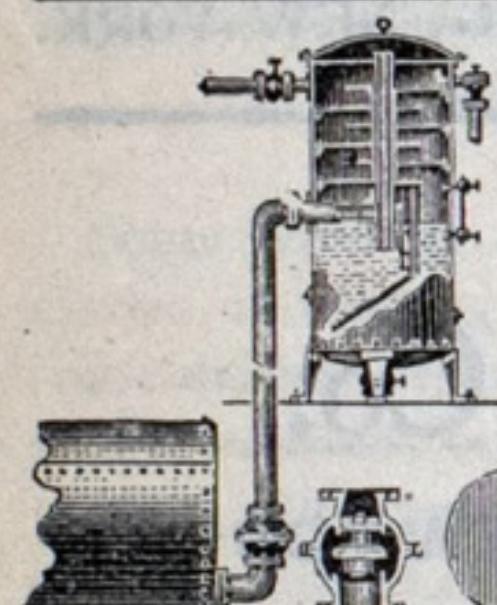
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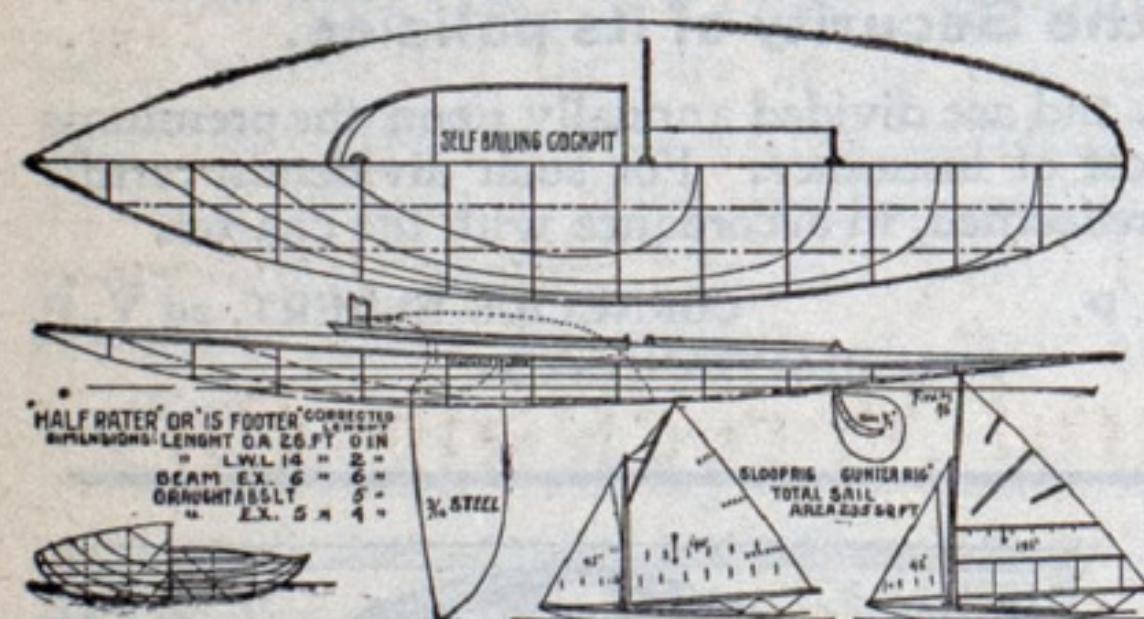
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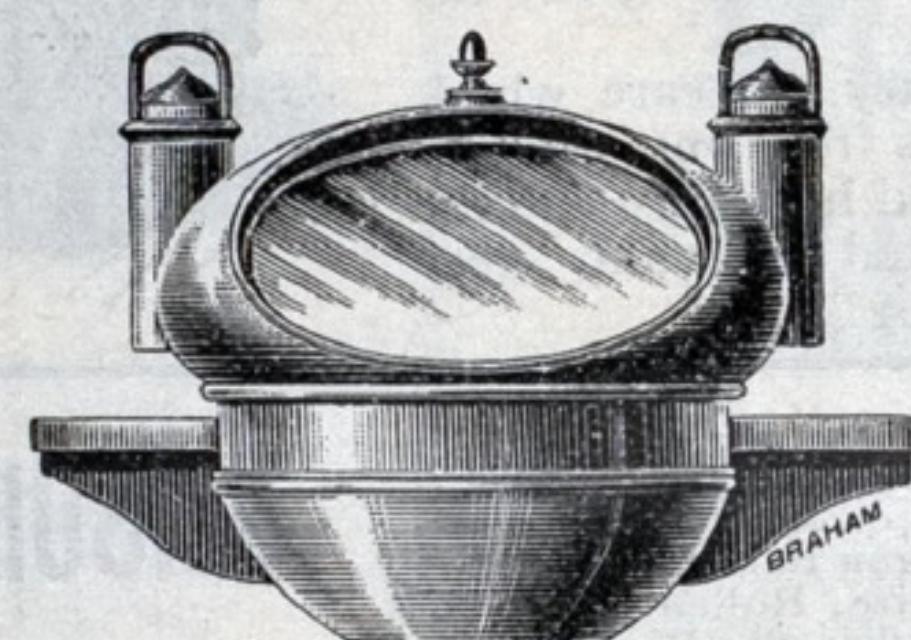
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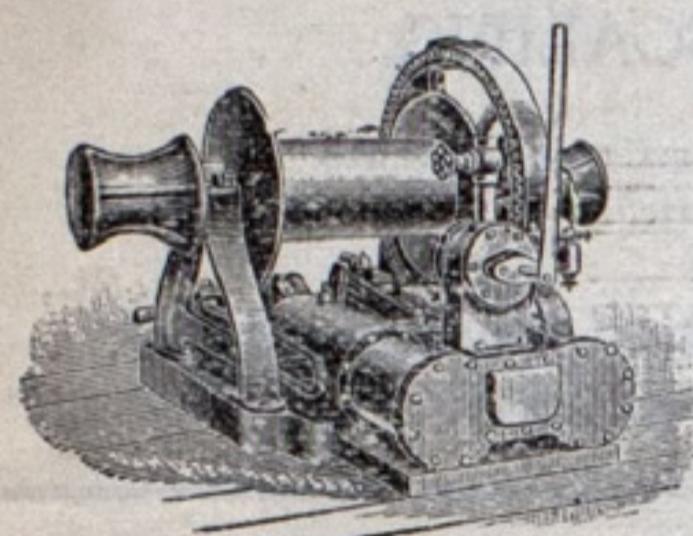
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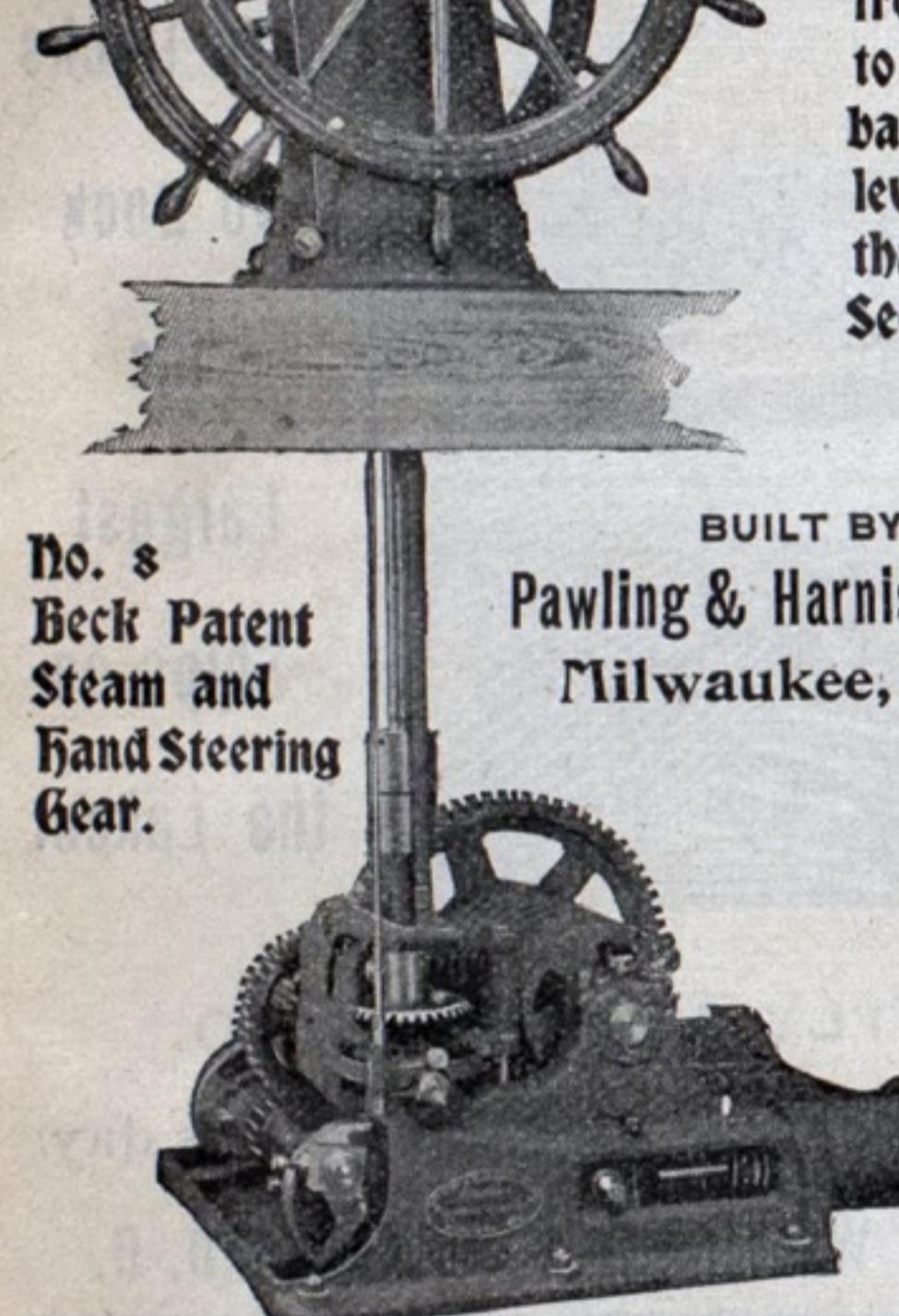
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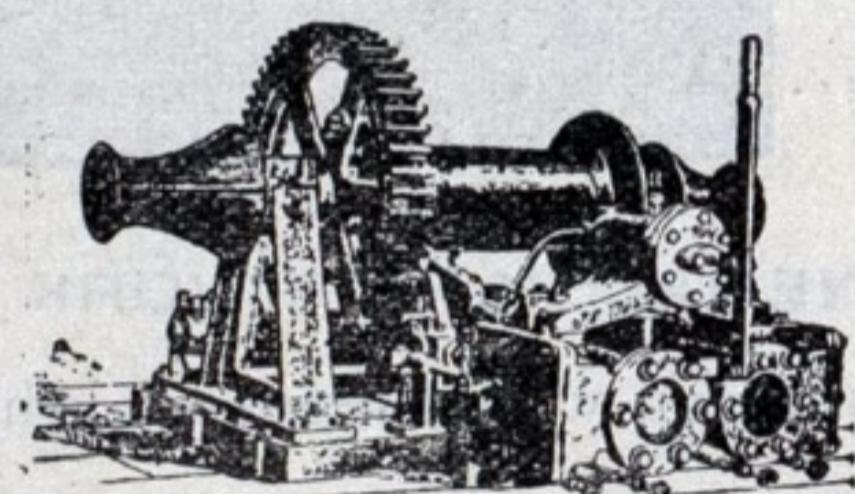
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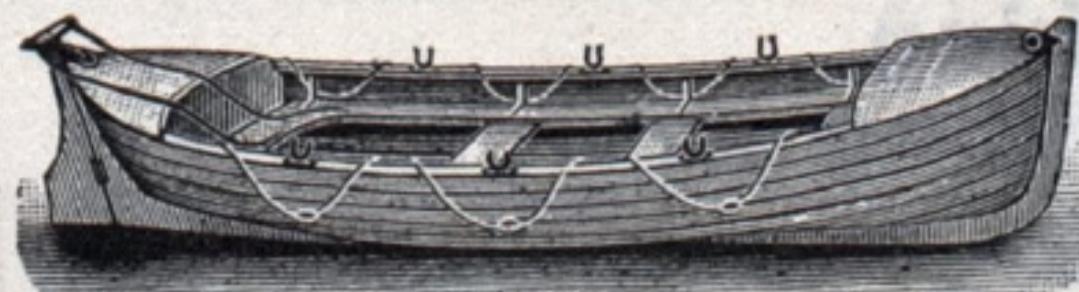
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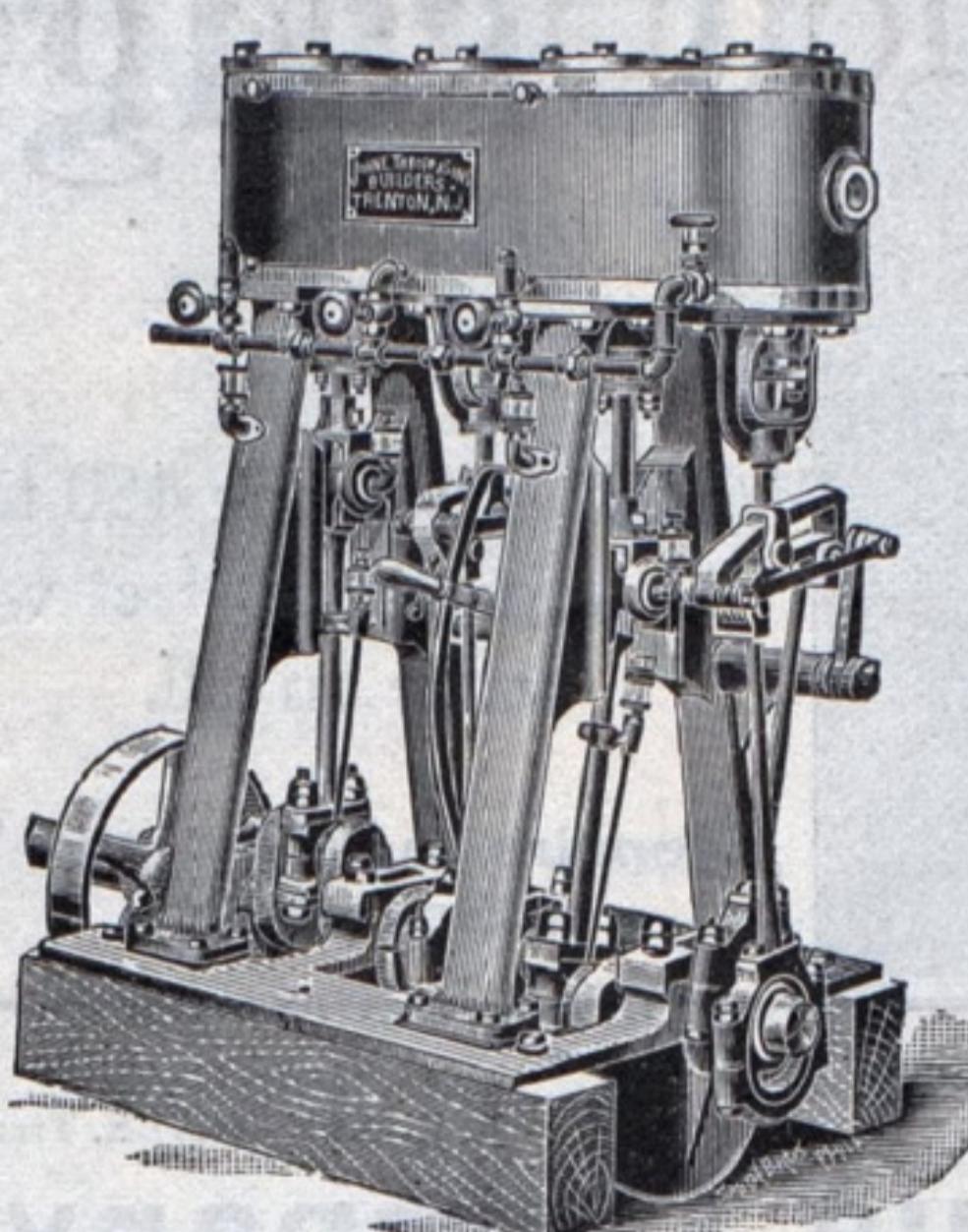
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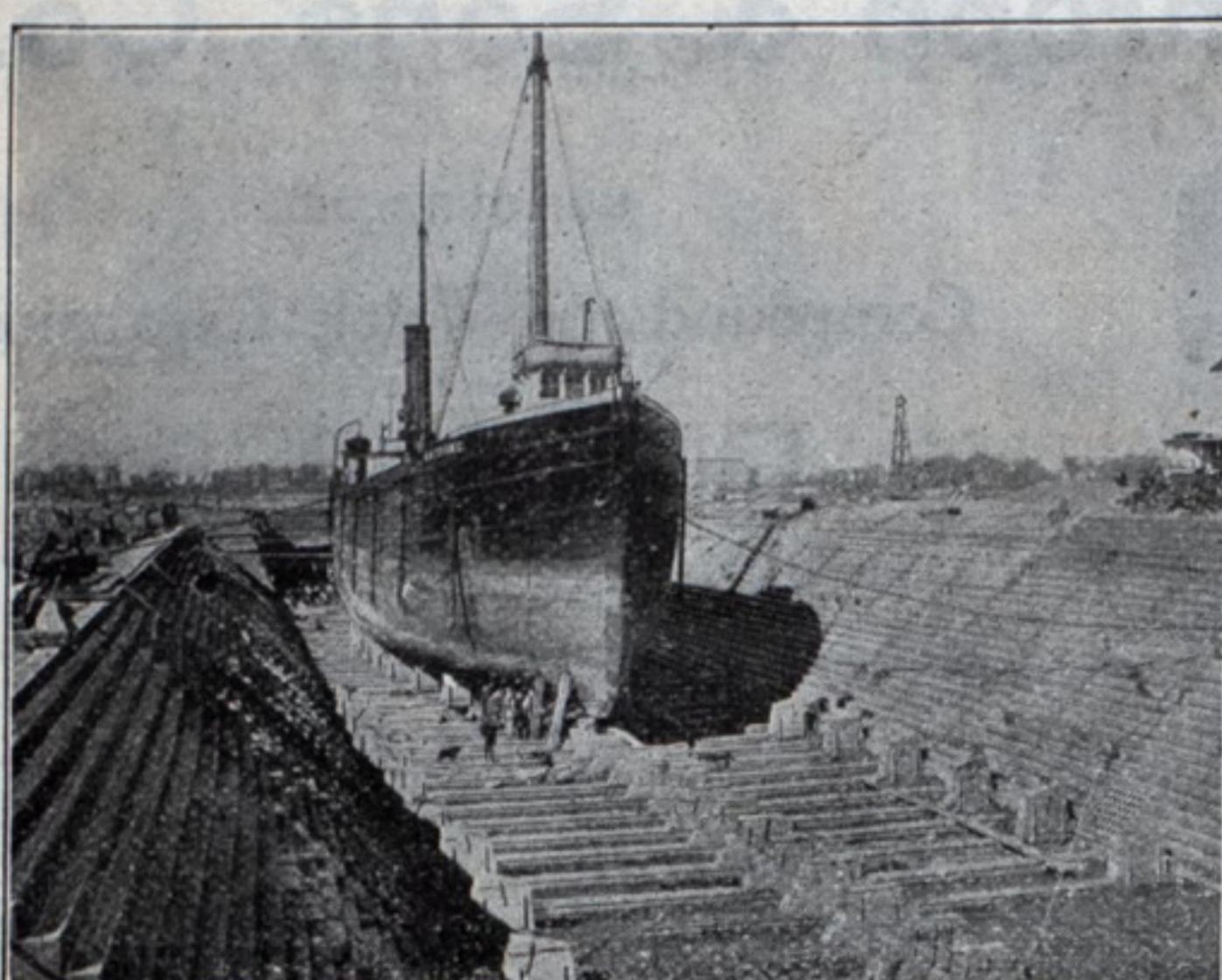
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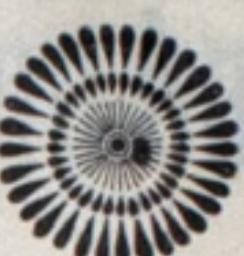
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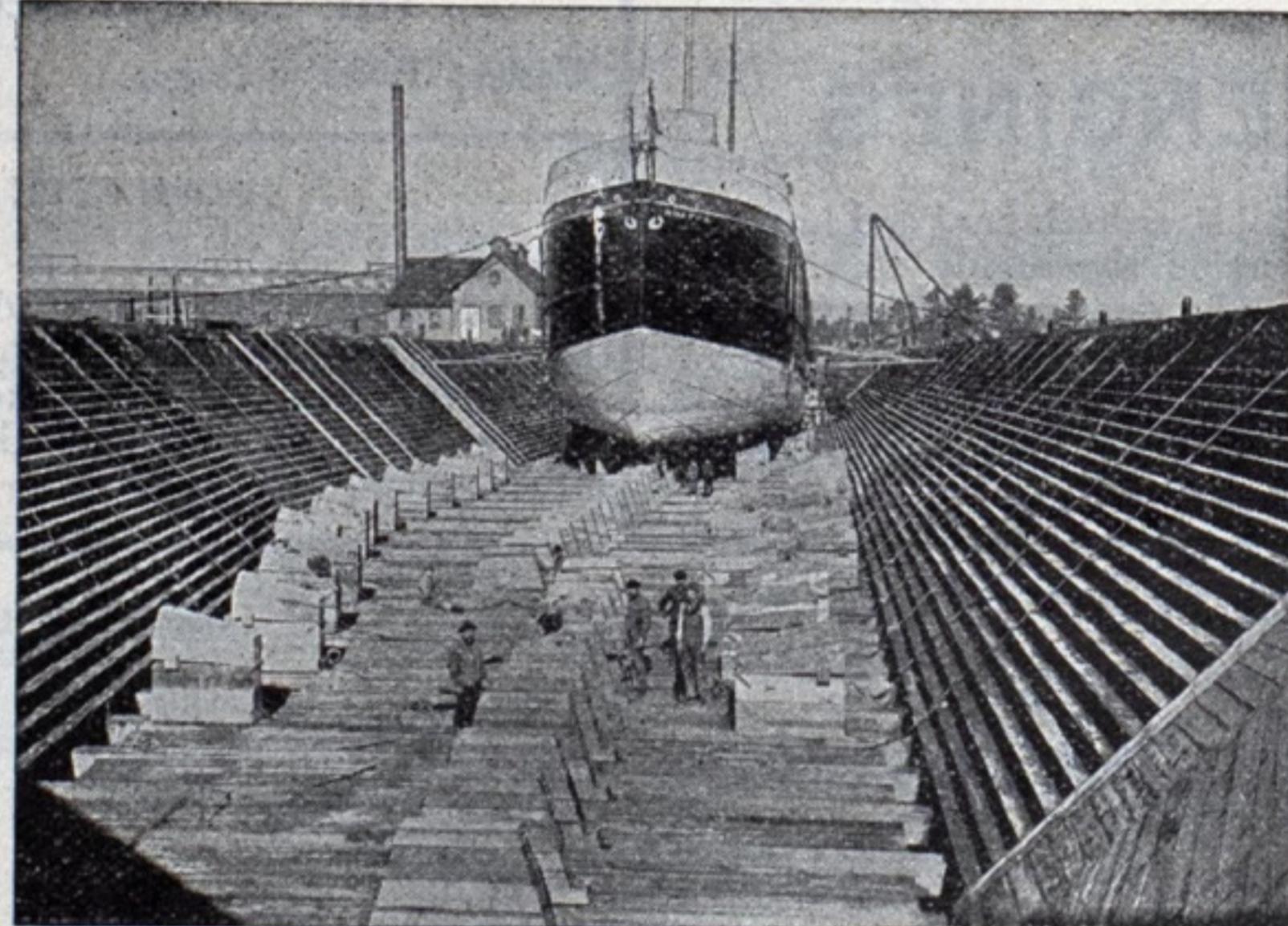
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Time.



SIZE OF DOCK			
Length, Extreme.....	537 feet.	Entrance, Top	55 feet 9 in.
Breadth, Top	90 " 4 in.	Entrance, Bottom.....	50 "
Breadth, Bottom.....	52 " "	Depth over Sills.....	18 "

LARGEST DRY-DOCK ON THE LAKES.

Prices for Repairs and Docking
same as at Lower Lake Ports.

A Number of Propeller Wheels in Stock at Dry-Dock.

A. Gilmore's Sons,

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Ship Building
and
Repairing.

EAST SIDE, NEAR IRONVILLE,

TOLEDO, O.

Dimensions of Dock, 236 feet long, 55 feet wide at top and 37 feet wide at gate. Nine feet water over sill. RATES OF DOCKING, Ten Cents per registered gross ton for vessels over 200 tons. Jig Mill and Planer in connection with Dock.

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Paint Your
Vessel with

Superior Graphite Paint

NO BLISTERING, CRACKING OR SCALING.

Made especially for Stacks, Decks, Sides, Hulls, and Water Compartments.
Strictly Anti-Rust, and most durable and economical.

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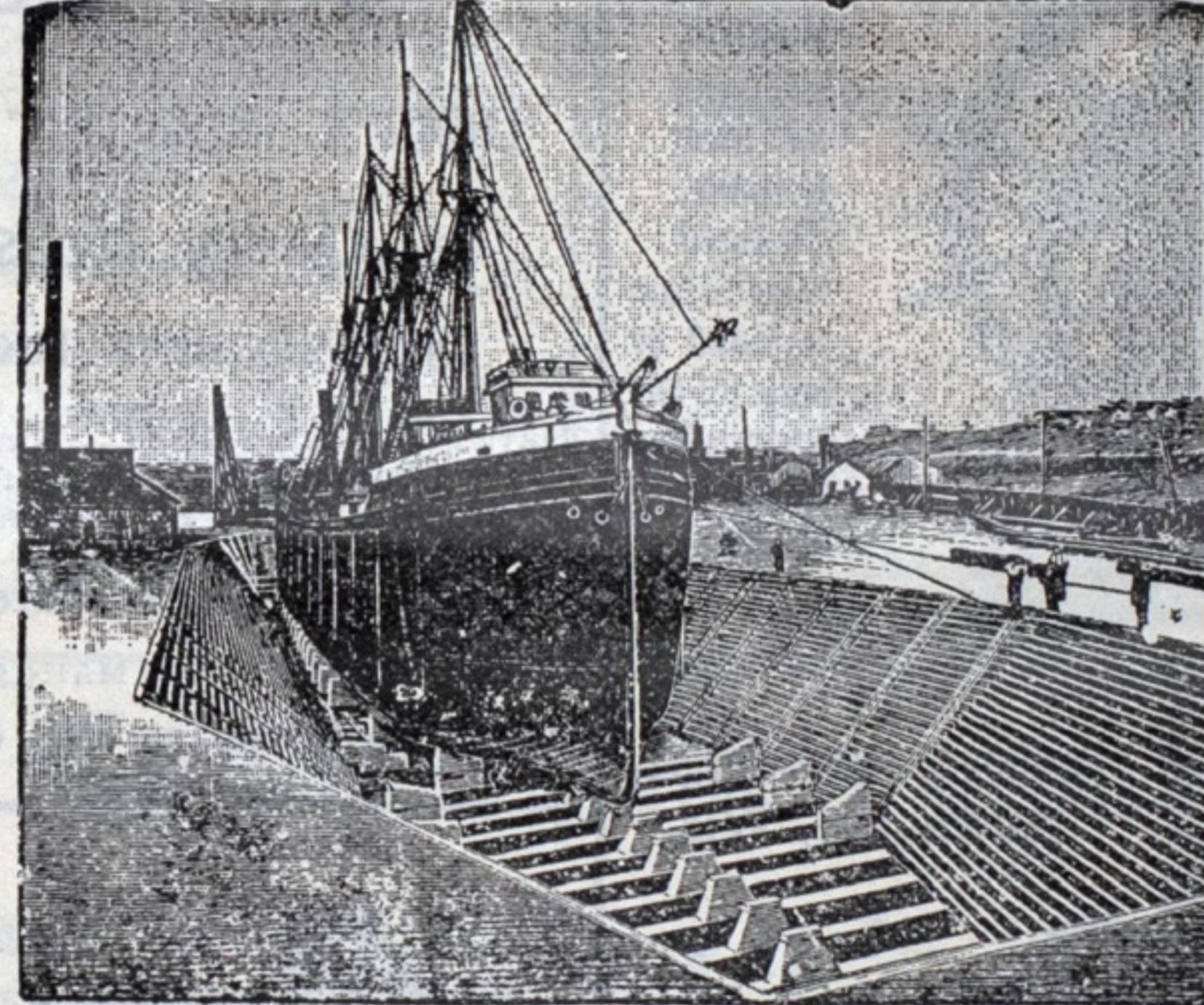
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YARD

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